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FILE COVERS 1907 - 16 Jun 2003  VOL 138 ISS 25
FILE LAST UPDATED: 15 Jun 2003  (20030615/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L1          1853 SEA FILE=REGISTRY ABB=ON  PLU=ON  (LYSINE OR ORNITHINE OR
                 ARGININE)(L)MONOHYDROCHLORIDE
L4             3 SEA FILE=REGISTRY ABB=ON  PLU=ON  LYSINE MONOHYDROCHLORIDE/CN
                 OR ORNITHINE MONOHYDROCHLORIDE/CN OR ARGININE MONOHYDROCHLORIDE
                 /CN
L5                SEL  PLU=ON  L4 1- CHEM :      26 TERMS
L6          3561 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5
L7          5326 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR L1 OR (LYSINE OR
                 ORNITHINE OR ARGININE)(5A)MONOHYDROCHLORID?
L10          111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND ANION?
L12           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10 AND (FEED OR FOOD OR
                 BIRTH OR DELIVERY OR PARTU? OR RUMINA? OR COW OR SHEEP OR GOAT
                 OR DEER OR GIRAFF?)


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L12  ANSWER 1 OF 18  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:322127  HCAPLUS
DOCUMENT NUMBER:          138:387434
TITLE:                    Electrodialysis process
INVENTOR(S):              Balavadze, E. M.; Bobreshova, O. V.; Bobrinskaya, G.
                          A.; Kulintsov, P. I.
PATENT ASSIGNEE(S):       Balavadze, Mikhail Elizbarovich, Russia
SOURCE:                   Russ., No pp. given
                          CODEN: RUXXE7
DOCUMENT TYPE:            Patent
LANGUAGE:                 Russian
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
```

RU 2195995	C1	20030110	RU 2001-133802	20011218

PRIORITY APPLN. INFO.: RU 2001-133802 20011218

AB The process is carried out in an electrodialyzer contg. an anode and a cathode sepd. by 2 cation-selective membranes between which an **anion**-selective membrane is located. A weak H2SO4 soln. is supplied to an anode chamber, and a weak HCl soln. is supplied to a chamber formed by cation- and **anion**-selective membranes and located near the anode chamber. The initial soln. contains **L-lysine hydrochloride**. A weak soln. of basic L-lysine or distd. water is supplied to the non-flow-through cathode chamber, and electrodialysis is conducted under galvanostatic conditions with a c.d. of 10-50 mA/cm2. Resulting pure basic L-lysine is suitable for pharmaceutical and **food** industries. The process is simple, and amt. of wastes is decreased.

L12 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:133121 HCAPLUS
DOCUMENT NUMBER: 138:183234
TITLE: Conjugates of macrocyclic metal complexes with biomolecules, and the use thereof for producing agents for use in NMR diagnosis, radiodiagnosis and radiotherapy
INVENTOR(S): Platzek, Johannes; Schmitt-Willich, Heribert; Michl, Guenther; Frenzel, Thomas; Suelzle, Detlev; Bauer, Hans; Raduechel, Bernd; Weinmann, Hanns-Joachim; Schirmer, Heiko
PATENT ASSIGNEE(S): Schering AG, Germany
SOURCE: PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003013617	A2	20030220	WO 2002-EP8000	20020718

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10135355	C1	20030417	DE 2001-10135355	20010720

PRIORITY APPLN. INFO.: DE 2001-10135355 A 20010720
OTHER SOURCE(S): MARPAT 138:183234

AB The invention discloses conjugates of macrocyclic metal complexes with biomols., as well as the prodn. thereof. The conjugates are suited for use as contrast agents in NMR diagnosis and radiodiagnosis and as agents for radiotherapy. A high relaxivity is achieved and a fine tuning of the relaxivity is made possible by a special liganding of the macrocycles.

IT **13204-98-3DP**, conjugates with gadolinium complexes
RL: DGN (Diagnostic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrocyclic metal complex-biomol. conjugates, prepn., and use as agents for NMR diagnosis, radiodiagnosis and radiotherapy)

L12 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:500728 HCAPLUS
DOCUMENT NUMBER: 135:335077
TITLE: Compaction properties of L-lysine salts
AUTHOR(S): Sun, Changquan; Grant, David J. W.
CORPORATE SOURCE: Department of Pharmaceutics, University of Minnesota, Minneapolis, MN, 55455-0343, USA
SOURCE: Pharmaceutical Research (2001), 18(3), 281-286
CODEN: PHREEB; ISSN: 0724-8741
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The purpose of this research was to examine the effects of salt form, i.e., different **anions** with a common cation (L-lysinium), on compaction properties and to identify the factors that det. the tensile strength of tablets. L-Lysine salts with the following **anions** were compressed at various pressures acetate, monochloride, dichloride, L-aspartate, L-glutamate (dihydrate), and L-lysine (zwitterionic monohydrate). The yield strength of each salt was evaluated from the "out-of-die" Heckel plot. At low compaction pressures, the tensile strength of the compacts increases linearly with increasing compaction pressure. Simultaneously, the compact tensile strength decreases exponentially with increasing yield strength of the salt. However, at high compaction pressures, the compact tensile strength is detd. by the interparticulate bonding strength and not by the yield strength. The compact tensile strength, extrapolated to zero porosity, increases linearly with increasing melting temp. of the salts. The counterion affects the tableting properties of L-lysine salts. The tensile strength is controlled by both the yield strength and the interparticulate interaction strength with the former predominant at low compaction pressures and the latter predominant at high compaction pressures. The melting temp. of each L-lysine salt is a good indicator of the tensile strength of its compacts at zero porosity.

IT **657-27-2**, L-**Lysine monohydrochloride**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compaction properties of L-**lysine** salts)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:208508 HCAPLUS
DOCUMENT NUMBER: 134:249215
TITLE: Substrates and screening methods for transport proteins
INVENTOR(S): Dower, William J.; Gallop, Mark; Barrett, Ronald W.; Cundy, Kenneth C.; Chernov-Rogan, Tania
PATENT ASSIGNEE(S): Xenoport, Inc., USA
SOURCE: PCT Int. Appl., 144 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001020331	A1	20010322	WO 2000-US25439	20000914.
WO 2001020331	C2	20021003		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1212619 A1 20020612 EP 2000-966735 20000914
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL
PRIORITY APPLN. INFO.: US 1999-154071P P 19990914
WO 2000-US25439 W 20000914

AB A variety of methods for assaying libraries of test compds. as ligands and/or substrates of transport proteins, including both carrier-type and receptor-type transport proteins, are provided. Both in vitro and in vivo screening methods are disclosed. Also provided are methods for screening DNA libraries to identify members that encode transport proteins. Pharmaceutical compns. including compds. identified via the screening methods are also provided. CHO K1 cells expressing PEPT1 transporter of human or rat were prepd. Fluorescent XP10486 was synthesized and used as PEPT1 substrate.

IT **330795-57-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(substrates and screening methods for transport proteins)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:605631 HCAPLUS
DOCUMENT NUMBER: 133:193489
TITLE: A process for simultaneous production of amino acid hydrochloride and caustic via electrodialytic water splitting
INVENTOR(S): Mani, K. N.
PATENT ASSIGNEE(S): Archer Daniels Midland Company, USA
SOURCE: U.S., 15 pp., Cont.-in-part of U.S. Ser. No. 193,626.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6110342	A	20000829	US 1998-223054	19981230
US 6331236	B1	20011218	US 1998-193626	19981117
EP 1016651	A1	20000705	EP 1999-310133	19991216
EP 1016651	B1	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 235456	E	20030415	AT 1999-310133	19991216
JP 2000218275	A2	20000808	JP 1999-374514	19991228
JP 3333960	B2	20021015		

PRIORITY APPLN. INFO.: US 1998-93558P P 19980721
US 1998-193626 A2 19981117
US 1998-223054 A 19981230

AB The invention uses a stack of three compartment electrodialysis cells in a process for the prodn. amino acid hydrochloride and an alkali. The electrodialysis cell contains bipolar, cation and **anion** membranes which are arranged to form acid, base and salt compartments. The process begins with supplying a salt soln. to the salt compartment, water to the base compartment, and a liq. comprising an amino acid to the acid compartment. Preferably, the **feed** salt is sodium chloride, potassium chloride, or lithium chloride. A d.c. driving force is applied across the cell to convert the salt soln. to an alkali in the base

compartments and an amino acid hydrochloride in the acid compartment. The acid and alkali solns. and a depleted salt soln. are withdrawn from their resp. compartments. A chelating agent may be added to the salt soln. before it is fed into the electrodialysis cell. The process was applied to the prodn. of **lysine hydrochloride** from a lysine **feed** soln.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:456728 HCAPLUS
DOCUMENT NUMBER: 133:74327
TITLE: A process for simultaneous production of amino acid hydrochloride and caustic via electrodialytic water splitting
INVENTOR(S): Mani, Krishnamurity N.
PATENT ASSIGNEE(S): Archer Daniels Midland Company, USA
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1016651	A1	20000705	EP 1999-310133	19991216
EP 1016651	B1	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6110342	A	20000829	US 1998-223054	19981230

PRIORITY APPLN. INFO.: US 1998-223054 A 19981230
US 1998-93558P P 19980721
US 1998-193626 A2 19981117

AB The invention uses a stack of three compartment electrodialysis cells in a process for the prodn. amino acid hydrochloride and an alkali. The electrodialysis cell contains bipolar, cation and **anion** membranes which are arranged to form acid, base and salt compartments. The process begins with supplying a salt soln. to the salt compartment, water to the base compartment, and a liq. comprising an amino acid to the acid compartment. Preferably, the **feed** salt is sodium chloride or potassium chloride or lithium chloride. A d.c. driving force is applied across the cell to convert the salt soln. to an alkali in the base compartments and an amino acid hydrochloride in the acid compartment. The acid and alkali solns. and a depleted salt soln. are withdrawn from their resp. compartments. A chelating agent may be added to the salt soln. before it is fed into the electrodialysis cell. The process was applied to the prodn. of **lysine hydrochloride** from a lysine **feed** soln.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:452485 HCAPLUS
DOCUMENT NUMBER: 133:68946
TITLE: Gel-forming hemostatic agents
INVENTOR(S): Yamada, Hideaki; Motoyashiki, Yukiko
PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000186048	A2	20000704	JP 1998-364842	19981222

PRIORITY APPLN. INFO.: JP 1998-364842 19981222

AB The hemostatic agents contain powd. polycationic substances and powd. polyanionic substances. Bleeding from a wound of an anesthetized rabbit was stopped within 1.9 min by spraying with a 1:1 (by wt.) polyallylamine.HCl-alginic acid mixt. powder.

L12 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:262164 HCAPLUS
DOCUMENT NUMBER: 130:316624
TITLE: Microparticulate and nanoparticulate polymeric **delivery** systems
INVENTOR(S): Prokop, Ales
PATENT ASSIGNEE(S): Vanderbilt University, USA
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9918934	A1	19990422	WO 1998-US21455	19981009
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9897991	A1	19990503	AU 1998-97991	19981009
EP 1021168	A1	20000726	EP 1998-952243	19981009
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1997-62943P P 19971009
WO 1998-US21455 W 19981009

AB The present invention provides a method of making particles useful in drug **delivery**, comprising the steps of: contacting polyanionic polymers with cations in a stirred reactor so that polyanions and the cations react to form particles. Nanoparticles were generated by using a droplet-forming polyanionic soln. composed of 0.1% high-viscosity sodium alginate and 0.05% chondroitin sulfate C in water and corona-forming polycationic soln. composed of 0.1% spermine-HCl, 0.01% poly(L-lysine-HCl) and 0.2% calcium chloride in water. The ratio of droplet- to corona-forming reactants was 1.0:20. The particles were instantaneously formed in a batch system, allowed to react for 2 h and their size and charge evaluated in the reaction mixt. The av. size was 280 nm and the av. charge 20.1 mV. Particles were stable as individual entities during 4-wk period at 4.degree.. The size of particles tended to increase upon their processing (washing in saline or water), if not stabilized.

IT **26124-78-7**, Polylysine hydrochloride
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microparticulate and nanoparticulate polymeric drug **delivery** systems)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:64674 HCAPLUS
DOCUMENT NUMBER: 130:80707
TITLE: **Anion** regulator for **ruminants**
INVENTOR(S): Usui, Naoki; Kobayashi, Hisamine; Chino, Masao;

PATENT ASSIGNEE(S): Nakamura, Yoshihiro; Takemoto, Tadashi
SOURCE: Ajinomoto Co., Inc., Japan
PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9902144	A1	19990121	WO 1998-JP3000	19980703
W: AU, CA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 11029469	A2	19990202	JP 1997-182161	19970708
AU 9879369	A1	19990208	AU 1998-79369	19980703
AU 744617	B2	20020228		
EP 1004300	A1	20000531	EP 1998-929819	19980703
R: DE, DK, FR, GB, IT, NL, SE				
US 2002127268	A1	20020912	US 2002-87843	20020305

PRIORITY APPLN. INFO.:
JP 1997-182161 A 19970708
WO 1998-JP3000 W 19980703
US 2000-446132 B1 20000407

AB The invention relates to an **anion** regulator for **ruminants** which contains as the active ingredient a neutral hydrochloride of an amino compd., such as a monohydrochloride of a basic amino acid. The regulator tastes so good that it does not cause prepartum dams to suffer a decrease in **feed** intake, and is excellent in the function of regulating **anions**.

IT **657-27-2**, **Lysine hydrochloride**
1119-34-2, **Arginine hydrochloride**
3184-13-2, **Ornithine hydrochloride**
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**anion** regulator for **ruminants**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:795157 HCAPLUS
DOCUMENT NUMBER: 130:24143
TITLE: A combined process for the production of lysine and its salts and of a further weak acid and a salt thereof
INVENTOR(S): Eyal, Aharon Meir; Jansen, Robert; Cami, Pierre
PATENT ASSIGNEE(S): Amylum Belgium N.V., Belg.; Whalley, Kevin
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9854351	A1	19981203	WO 1998-GB1436	19980519
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,				

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9874432	A1	19981230	AU 1998-74432	19980519
PRIORITY APPLN. INFO.:			IL 1997-120923	19970527
			WO 1998-GB1436	19980519

AB The invention provides a process for the combined prodn. of products selected from the group consisting of lysine and its salts and products selected from the group consisting of .gtoreq.1 weak acid and a salt thereof, which weak acid is selected from the group consisting of org. acids and amino acids produced by a neutral bio-process, the process comprising: (a) acidulating an aq. **feed** stream contg. the weak acid and NH4+ cations with an acidulating acid, which acidulating acid has .gtoreq.1 pKa lower than 4.2, (b) recovering at least part of the weak acid from the aq. soln. formed in step (a), forming thereby an aq. soln. of an NH4+ salt comprising NH4+ cations resulting from the **feed** soln. in step (a) and **anions** of the acidulating acid, and (c) fermenting a medium contg. .gtoreq.1 C source, .gtoreq.1 org. N source and NH4+ salt resulting from step (b), utilizing a lysine-producing microorganism, whereby there is formed a fermn. liquor contg. .gtoreq.50 g lysine/L, whereby the fermn. liquor is suitable for use as a source of lysine in animal **feed**.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:	1997:479367 HCAPLUS
DOCUMENT NUMBER:	127:99844
TITLE:	Complex cationic lipids as cytofectins
INVENTOR(S):	Wheeler, Carl J.
PATENT ASSIGNEE(S):	Vical Incorporated, USA
SOURCE:	PCT Int. Appl., 55 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9719675	A2	19970605	WO 1996-US19721	19961127
WO 9719675	A3	19971002		
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2237316	AA	19970605	CA 1996-2237316	19961127
EP 863749	A2	19980916	EP 1996-943691	19961127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000502061	T2	20000222	JP 1997-520757	19961127
PRIORITY APPLN. INFO.:			US 1995-565756	19951130
			WO 1996-US19721	19961127

OTHER SOURCE(S): MARPAT 127:99844

AB Cationic lipids (cytofectins) having a derivatized quaternary ammonium head group (Rosenthal phospholipase A inhibitor core structure) are provided which provide improved cell targeting ability and enhance transfective efficacy for neg. charged macromols. such as amino acids, peptides, polynucleotides, and polysaccharides. The head group is attached to an alkyl linker having functional groups that provide sites for attachment of drugs, cell receptor ligands, or other bioactive agents. Thus, chloramphenicol acetyltransferase (CAT) DNA was coupled to (.+-.)-N-(2-hydroxyethyl)-N,N-dimethyl-3,4-bis(lauryloxy)-1-propanaminium bromide (I) and administered intranasally to mice. The lungs were removed and extd. 2-3 days later and assayed for CAT. CAT expression was promoted by coupling to I.

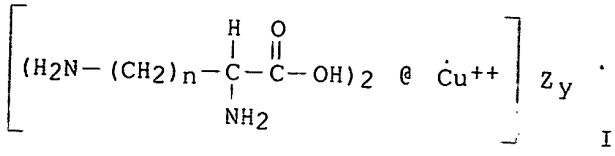
IT **51298-62-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(complex cationic lipids as cytofectins)

L12 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:455828 HCAPLUS
DOCUMENT NUMBER: 119:55828
TITLE: Status of certain additional over-the-counter drug category II and III active ingredients
CORPORATE SOURCE: United States Food and Drug Administration, Rockville, MD, 20857, USA
SOURCE: Federal Register (1993), 58(88), 27636-44, 10 May 1993
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal **Food**, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.

L12 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:422447 HCAPLUS
DOCUMENT NUMBER: 113:22447
TITLE: Copper complexes of alpha-amino acids that contain terminal amino groups, and their use as nutritional supplements
INVENTOR(S): Abdel-Monem, Mahmoud M.; Anderson, Michael D.
PATENT ASSIGNEE(S): Zinpro Corp., USA
SOURCE: U.S., 5 pp. Cont.-in-part of U.S. Ser. No. 285,593, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4900561	A	19900213	US 1989-293225	19890103
US 4948594	A	19900814	US 1989-396685	19890822
AU 8943993	A1	19900712	AU 1989-43993	19891101
AU 618141	B2	19911212		
CA 2002558	AA	19910222	CA 1989-2002558	19891108
CA 2002558	C	19950829		
JP 02184689	A2	19900719	JP 1989-296318	19891116
JP 06099451	B4	19941207		
EP 377526	A2	19900711	EP 1990-400004	19900102
EP 377526	A3	19910417		
EP 377526	B1	19951227		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
AT 132152	E	19960115	AT 1990-400004	19900102
ES 2088995	T3	19961001	ES 1990-400004	19900102

PRIORITY APPLN. INFO.: US 1988-285593 19881216
US 1989-293225 19890103
US 1989-396685 19890822
US 1989-285593 19891216
OTHER SOURCE(S): MARPAT 113:22447
GI



I

AB A nutritional Cu supplement, e.g. for **feeds**, comprises an amino acid-Cu complex salt of formula I, where n = 1-5, Z is an inorg. **anion**, and Y is the no. required to electrostatically balance the salt. Cu lysine sulfate was prepd. from lysine, H2O and CuSO4.5H2O.

IT **657-27-2**
RL: BIOL (Biological study)
(copper complex salts manuf. with, as nutritional supplements)

L12 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:401144 HCAPLUS
DOCUMENT NUMBER: 113:1144
TITLE: Effect of sodium and chloride infusion on loop function and plasma renin activity in rats
AUTHOR(S): Lorenz, John N.; Kotchen, Theodore A.; Ott, Cobern E.
CORPORATE SOURCE: Dep. Physiol., Univ. Kentucky, Lexington, KY, 40536, USA
SOURCE: American Journal of Physiology (1990), 258(5, Pt. 2), F1328-F1335
CODEN: AJPHAP; ISSN: 0002-9513
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The hypothesis was tested that inhibition of renin release by selective Cl infusion in the rat is related to increased Cl- transport in the thick ascending limb of the loop of Henle (TALH). Measurements of loop of Henle function were obtained by micropuncture before and after a 5% body wt. infusion of solns. contg. either 0.15M NaCl, 0.15M **lysine monohydrochloride** (LysCl), or 0.15 M Na-assorted **anions** (NaAA). Both NaCl and LysCl infusion lowered plasma renin activity (PRA) (60.8 to 22.6 ng angiotensin I (ANG I)/mL/h and 53.3 to 34.5 ng ANG I/mL/h, whereas NaAA infusion had no effect on PRA (66.7 to 59.1 ng ANG I/mL/h). Anal. of late proximal and early distal fluid showed that Cl transport in the TALH was significantly elevated by infusion in all 3 groups, and there were no differences among the groups after infusion. Distal Cl concn. increased in the NaCl and LysCl groups (26 to 37 meq/L and 26 to 36 meq/L), but distal Cl concn. decreased in the NaAA group (28 to 22 meq/L). There was no correlation between PRA and fluid flow rate or Cl **delivery** to the distal tubule. Each of the 3 electrolyte infusions resulted in expansion of plasma vol. that may have attenuated or masked some changes in PRA, but these vol. changes were not different among the 3 groups. Under the present circumstances renin secretion rate is inversely related to the Cl concn. in the early distal tubule. To the extent that transport at the macula densa may be dependent on the Cl concn. at the macula densa cells, these data are consistent with the hypothesis that renin release is dependent on the magnitude of reabsorptive Cl transport at the macula densa.

L12 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:532908 HCAPLUS
DOCUMENT NUMBER: 111:132908
TITLE: Cationic surfactants for potentiating the salt taste of **food** and for reducing the salt content thereof
INVENTOR(S): Desimore, John A.; Heck, Gerard L.
PATENT ASSIGNEE(S): Center for Innovative Technology, USA
SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8806850	A1	19880922	WO 1988-US467	19880210
W: AU, DK, FI, JP, KR, NO				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8814843	A1	19881010	AU 1988-14843	19880210
EP 305469	A1	19890308	EP 1988-902658	19880210
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 03502517	T2	19910613	JP 1988-502623	19880210
JP 2591812	B2	19970319		
US 4997672	A	19910305	US 1990-556867	19900725

PRIORITY APPLN. INFO.: US 1987-24170 19870310
US 1988-157083 19880208
WO 1988-US467 19880210
US 1988-241270 19880907

OTHER SOURCE(S): MARPAT 111:132908

AB Cationic surfactants [Q]m+[X]n-.cntdot.YH20 (Q = R1NR2(R3)(R4); R1 = (un)satd. alkyl, C .gtoreq. 11; R2, R3, R4 = alkyl, aryl, aralkyl, alkoxyalkyl, C .ltoreq. 24; or .gtoreq. 2 groups form heterocyclic ring with N; Q = N-R1-pyridine; X = mono- or polyvalent **anion** of acid; m = valence of x; n = 1; yr = 0-12) potentiate the NaCl taste in **foods** and beverages. they can be used in prepg. low-salt **foods** and beverages. Two cans of tomato soup, one contg. 50 mM NaCl, the other contg. NaCl 50 mM and cetylpyridinium chloride (I) 60 .mu.M were taste tested. The I-contg. soup was judged to be more salty by a panel of scientists. The salty taste was equiv. to a 75-80 mM NaCl concn.

L12 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:220581 HCAPLUS
DOCUMENT NUMBER: 108:220581
TITLE: Manufacture of decolorized **lysine monohydrochloride** solutions for the **feed** and **food** and pharmaceutical industries
INVENTOR(S): Hellmig, Reinhard; Goebel, Rupert; Fiedler, Elke; Gramlich, Kurt; Kodura, Juergen
PATENT ASSIGNEE(S): VEB Chemiekombinat Bitterfeld, Ger. Dem. Rep.
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 248811	A1	19870819	DD 1986-289857	19860502

PRIORITY APPLN. INFO.: DD 1986-289857 19860502

AB Solns. of lysine or lysine.cntdot.HCl are treated with a weakly basic **anion** exchange resin in the chloride form to remove reactive colored compds. (dyes) and excess chloride. Lysine soln. (45 g/L) was acidified to pH 2.5, placed on a strong acid cation exchanger in H form, eluted and NH3 excess removed from the lysine conc. (150 g lysine/L). To 0.5L of this eluate, 50 mL of mother liquor from a previous cycle (Wofatit AD) was added and the mixt. placed on 1.0L Wofatit AD 41 in chloride form. The effluent was pH 4.6, 65% decolorized, and contained 28.1 g Cl-.

IT **657-27-2, Lysine monohydrochloride**
RL: BIOL (Biological study)
(decolorization of solns. of, by ion exchange chromatog.)

L12 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:110999 HCAPLUS
DOCUMENT NUMBER: 108:110999
TITLE: Influence of various salts and water soluble compounds on the water and fat exudation and gel strength of meat batters
AUTHOR(S): Whiting, R. C.
CORPORATE SOURCE: East. Reg. Res. Cent., ARS, Philadelphia, PA, 19118, USA
SOURCE: Journal of Food Science (1987), 52(5), 1130-2, 1158
CODEN: JFDSAZ; ISSN: 0022-1147
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Meat batters were prepd. in which the sodium and chloride from salt was replaced by other ions. Then the functional properties of the batters were detd. by measuring water and fat exudation, and gel strength. Generally cations from groups IA and IIA of the periodic table equalled or surpassed the batters made with sodium only, whereas other cations decreased water binding. Of the **anions**, bromide, ortho- and pyrophosphates, and citrate increased water retention. Zinc chloride increased fat exudation greatly. Magnesium chloride and sodium pyrophosphate increased the gel strength. Magnesium and calcium chlorides made good batters although they caused a drop of .apprx.0.25 pH units. Sodium thiosulfate, sodium borohydride, starch, sucrose, glycerol, arginine and urea improved the water binding and gel strength, while nonionic detergents, monoglycerides and alcs. were very detrimental.
IT **1119-34-2, Arginine hydrochloride**
RL: BIOL (Biological study)
(of meat batters, fat and water exudation and gel strength response to)

L12 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:438362 HCAPLUS
DOCUMENT NUMBER: 107:38362
TITLE: Manufacture of **L-lysine hydrochloride** solutions
INVENTOR(S): Goebel, Rupert; Hellmig, Reinhard
PATENT ASSIGNEE(S): Institut fuer Technische Mikrobiologie, Ger. Dem. Rep.
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 242426	A1	19870128	DD 1985-282160	19851029
PRIORITY APPLN. INFO.:			DD 1985-282160	19851029

AB L-Lysine-HCl solns. for prodn. of cryst. lysine-HCl for the **food** industry are purified by elution through a strong acid cation exchanger in the H form with HCl and then excess Cl- removal on a weak basic **anion** exchanger and pH adjustment for crystn. of L-lysine-HCl. Thus, a fermn. soln. contg. 30g lysine/L was adjusted to pH 2.5 (H_2SO_4), lysine adsorbed on a strong acid cation exchanger in H form with flushing for NH_4^+ removal, and elution of lysine with 4M HCl. The lysine fraction (7L) was concd. (heat, pressure) to 1.4 L contg. 176g lysine/L. Excess Cl- was removed and the lysine decolorized by elution through a weak basic **anion** exchanger (AD 41) to produce, on crystn., L-lysine-HCl of 98.5% purity.

IT **657-27-2P, L-Lysine monohydrochloride**
RL: PUR (Purification or recovery); PREP (Preparation)
(purifn. of, by ion exchanger)

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=> d stat que
L1          1853 SEA FILE=REGISTRY ABB=ON  PLU=ON  (LYSINE OR ORNITHINE OR
                 ARGININE)(L)MONOHYDROCHLORIDE
L4             3 SEA FILE=REGISTRY ABB=ON  PLU=ON  LYSINE MONOHYDROCHLORIDE/CN
                 OR ORNITHINE MONOHYDROCHLORIDE/CN OR ARGININE MONOHYDROCHLORIDE
                 /CN
L5               SEL  PLU=ON  L4 1- CHEM :      26 TERMS
L6          3561 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5
L7          5326 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR L1 OR (LYSINE OR
                 ORNITHINE OR ARGININE)(5A)MONOHYDROCHLORID?
L10          111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND ANION?
L12           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10 AND (FEED OR FOOD OR
                 BIRTH OR DELIVERY OR PARTU? OR RUMINA? OR COW OR SHEEP OR GOAT
                 OR DEER OR GIRAFF?)
L14          315 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7 AND (FEED OR FOOD)
L15           48 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (RUMINA? OR COW OR
                 SHEEP OR GOAT OR DEER OR GIRAFF?)
L16           47 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 NOT L12


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L16  ANSWER 1 OF 47  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:363966  HCAPLUS
DOCUMENT NUMBER:          136:354545
TITLE:                    Use of an org. acid-sorbic acid preparation as a
                          feed additive in the raising of livestock
INVENTOR(S):              Raczek, Nico N.; Mollenkopf, Christoph
PATENT ASSIGNEE(S):       Nutrinova Nutrition Specialties & Food Ingredients
                          Gmbh, Germany
SOURCE:                   Eur. Pat. Appl., 9 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
     EP 1205115         A2   20020515      EP 2001-125441    20011102
     EP 1205115         A3   20020703
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     DE 10055390        A1   20020529      DE 2000-10055390  20001109
     US 2002086090      A1   20020704      US 2001-15913     20011031
     AU 2001089339      A5   20020516      AU 2001-89339     20011108
     JP 2002191293      A2   20020709      JP 2001-343286    20011108
PRIORITY APPLN. INFO.:                    DE 2000-10055390 A  20001109
AB   A very stable, easily manageable feed additive comprises sorbic
     acid, .gtoreq.1 liq. acid (at room temp.) and a solid org. acid with an
     addnl. carrier, total acid comprising >80% by wt. and sorbic acid
     comprising 10-50%.  The additive may be used alone or with other additives
     for improvement of hygiene and for productivity improvement.
IT   657-27-2, Lysine hydrochloride
     RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
        (use of an org. acid-sorbic acid prepn. as a feed additive in
        the raising of livestock)

L16  ANSWER 2 OF 47  HCAPLUS  COPYRIGHT 2003 ACS
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ACCESSION NUMBER: 2001:237671 HCAPLUS
DOCUMENT NUMBER: 134:265679
TITLE: **Feed** additives for lactating **cows** comprising RPAA (rumen-protected amino acids)
INVENTOR(S): Tojo, Takeshi; Suzuki, Hiroyuki; Ueda, Takeo; Shinsato, Izuru; Sato, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001086940	A2	20010403	JP 1999-268035	19990922

PRIORITY APPLN. INFO.: JP 1999-268035 19990922

AB The additives comprising RPAA are added to **feed** for lactating **cows** having NEL (net energy for lactation) .gtoreq.0.80 Mcal/lb-DM when calcd. using CPM dairy (a software for calcg. nutritive value of **feed** for lactating **cows**) at 0.1-2.5% (dry matter base) to increase milk prodn. Addn. of RPAA (**L-lysine hydrochloride** 40%, DL-methionine 10%) to a basic **feed** (NEL = 0.87 Mcal/lb-DM) at 1.82% (dry matter base) significantly increased milk prodn.

L16 ANSWER 3 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:672194 HCAPLUS
DOCUMENT NUMBER: 131:350624
TITLE: Evaluation of **ruminally** protected methionine and lysine or blood meal and fish meal as protein sources for lactating Holsteins
AUTHOR(S): Bateman, H. G., II; Spain, J. N.; Kerley, M. S.; Belyea, R. L.; Marshall, R. T.
CORPORATE SOURCE: Department of Animal Science, University of Missouri, Columbia, MO, 65211, USA
SOURCE: Journal of Dairy Science (1999), 82(10), 2115-2120
CODEN: JDSCAE; ISSN: 0022-0302
PUBLISHER: American Dairy Science Association
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Forty lactating Holstein **cows** averaging 55 days in milk were used to evaluate the effectiveness of **ruminally** protected Met and Lys amino acids (AA) compared with **ruminally** undegradable protein for supporting lactation. **Cows** were fed total mixed diets for 15 wk. Diets were formulated to be isonitrogenous with the same base ingredients resulting in 15.5% crude protein (CP). Supplemental CP from urea, soybean meal (SBM), or 50:50 mixt. of fish and blood meal increased the total dietary nitrogen to 18.0% of **feed** dry matter. Two addnl. diets with SBM or urea were supplemented with **ruminally** protected DL-Met plus Lys-HCl at 10 and 25 g/day, resp. (SBM + AA, urea + AA). Mean measures of dry matter intake, milk yield, milk protein %, and milk fat % were not affected by protein supplements. Milk protein yield, milk fat yield, casein yield, and casein % were also not affected by the source of supplemental protein. Thus, the level of CP intake relative to milk prodn. and the source of protein did not affect the lactation performance.

IT **657-27-2, L-Lysine hydrochloride**
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(blood meal and fish meal and **ruminally** protected methionine and lysine evaluation as dietary protein sources for lactating Holstein **cows**)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:662003 HCAPLUS
DOCUMENT NUMBER: 131:336239
TITLE: Influence of postruminal supplementation of methionine and lysine, isoleucine, or all three amino acids on intake and chewing behavior, **ruminal** fermentation, and milk and milk component production
AUTHOR(S): Robinson, P. H.; Chalupa, W.; Sniffen, C. J.; Julien, W. E.; Sato, H.; Fujieda, T.; Watanabe, K.; Suzuki, H.
CORPORATE SOURCE: Department of Animal Science, University of California, Davis, CA, 95616-8521, USA
SOURCE: Journal of Animal Science (Savoy, Illinois) (1999), 77(10), 2781-2792
CODEN: JANSAG; ISSN: 0021-8812
PUBLISHER: American Society of Animal Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four multiparous Holstein **cows** were fed a basal diet balanced with the Cornell Net Protein and Carbohydrate System (CNCPS). The diets were formulated to be co-limiting in intestinally absorbable supplies of methionine, lysine, and isoleucine. The **cows** were supplemented with no amino acids (control), lysine plus methionine in **ruminally** protected form, isoleucine by abomasal infusion, or lysine, methionine and isoleucine in 28-day periods. The dairy performance of **cows** on all treatments was lower than expected due to low intakes of dry matter (DM) that could have been caused by the high fiber level in the basal diet. This high fiber level was likely responsible for the high daily chewing times in **cows** fed all diets, which was consistent with the high **ruminal** pH values. The intakes of DM and its components were not influenced by the treatments. Milk protein % tended to be higher when **cows** were fed **ruminally** protected lysine plus methionine, but the prodn. of milk, milk fat, and milk lactose were not affected by any dietary treatment. **Cows** tended to have higher milk lactose proportions and tended to produce more milk and milk lactose when abomasally infused with isoleucine alone. When the **cows** were given all 3 amino acids, milk prodn. and compn. did not differ from that in **cows** fed the nonsupplemented diet. The use of CNCPS to evaluate the performance of **cows** fed the nonsupplemented diet suggested that these **cows** may have been colimited by intestinally absorbable supplies of lysine, isoleucine, and methionine in addn. to metabolizable protein. Evaluation of the nonsupplemented diet with the Shield alternate model suggested that **cows** fed the nonsupplemented diet may have been colimited by intestinally absorbable supplies of lysine, isoleucine, and arginine. The enhanced delivery of intestinally absorbable isoleucine may stimulate milk lactose synthesis.

IT **657-27-2, L-Lysine hydrochloride**
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(methionine, lysine and isoleucine postruminal supplements effects on **feed** intake, chewing behavior, **ruminal** fermn., milk prodn. and milk compn. in dairy **cows**)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 5 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:579493 HCAPLUS
DOCUMENT NUMBER: 131:184262
TITLE: **Ruminant feed** additive composition and process for producing the same
INVENTOR(S): Takemoto, Tadashi; Kitamura, Nobuyoshi; Kato,

PATENT ASSIGNEE(S): Toshihisa; Oshimura, Masahiko; Mori, Ken-ichi
Ajinomoto Co., Inc., Japan
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 940088	A2	19990908	EP 1999-301606	19990303
EP 940088	A3	19991215		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11243871	A2	19990914	JP 1998-51968	19980304
JP 11346670	A2	19991221	JP 1998-155605	19980604
JP 2000060440	A2	20000229	JP 1998-233075	19980819
US 6238727	B1	20010529	US 1999-261226	19990303

PRIORITY APPLN. INFO.:
JP 1998-51968 A 19980304
JP 1998-155605 A 19980604
JP 1998-233075 A 19980819

AB Disclosed herein are a **ruminant feed** additive compn. contg. (a) lysine magnesium phosphate, (b) magnesium oxide, (c) a binder and (d) water, said water content being between 5 and 15% by wt., and a process for producing the same. In such **ruminant feed** additive compn. the physiol. active substance is fully protected in the rumen and rapidly dissolved in the abomasum, and which can easily be granulated by an extrusion-granulating method and the like. Disclosed herein is also a process for producing a **ruminant feed** additive compn., which comprises mixing the ingredients and extrusion granulation, optionally coating the resulting granules with a rumen-protective substance.

L16 ANSWER 6 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:363822 HCAPLUS
DOCUMENT NUMBER: 131:129322
TITLE: Absence of limiting amino acids in calves fed a corn and soybean meal diet past three months of age
AUTHOR(S): Abe, M.; Yamazaki, K.; Kasahara, K.; Iriki, T.; Kuriyama, R.; Funaba, M.
CORPORATE SOURCE: School of Veterinary Medicine, Azabu University, Sagamihara, 229, Japan
SOURCE: Journal of Animal Science (Savoy, Illinois) (1999), 77(3), 769-779
CODEN: JANSAG; ISSN: 0021-8812
PUBLISHER: American Society of Animal Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three nitrogen balance trials with Holstein bull calves 13, 15, and >16 wk of age were conducted to identify limiting amino acids for a corn/soybean meal diet. All calves were trained to maintain reflex closure of the reticular groove after weaning at 5 wk of age. The basal diet was fed daily at 20 or 27 g/kg body wt. The lower feeding level decreased urinary excretion of purine derivs., suggesting decreased synthesis of **ruminal** microbial protein. Administration of DL-methionine plus L-lysine HCl through the reticular groove did not increase the N retention compared with the supplement of isonitrogenous L-glutamine at either **feed** intake level. Administration of casein or isonitrogenous monosodium glutamate increased the N retention to a similar extent above that obsd. with a N-free supplement. No specific amino acids were limiting for the corn/soybean meal diet. Administration of methionine plus lysine increased blood plasma methionine levels, esp. at the lower

intake level, and decreased plasma branched-chain amino acid concns. at either intake level. Glutamine supplementation did not increase the plasma branched-chain amino acids compared with supplementation of diammonium citrate.

IT **657-27-2, L-Lysine hydrochloride**
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (limiting amino acids in calves fed corn/soybean meal diet past 3 mo of age)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 7 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:119743 HCAPLUS
DOCUMENT NUMBER: 130:167674
TITLE: Method for supplementing amino acid levels in **ruminant** animals
INVENTOR(S): Rode, Lyle M.; Julien, William E.; Sato, Hiroyuki; Fujieda, Takeshi; Suzuki, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: U.S., 20 pp., Cont.-in-part of U.S. Ser. No. 427,718.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5871773	A	19990216	US 1995-514726	19950814
US 5720970	A	19980224	US 1995-427718	19950421

PRIORITY APPLN. INFO.: US 1994-200490 B2 19940223
US 1995-427718 A2 19950421
US 1993-18250 B1 19930216

AB A method for supplementing amino acid levels in **ruminants** is provided, where rumen-protected amino acids, particularly lysine and/or methionine encapsulated in **ruminally** inert coatings, are used to supplement **ruminant feed**. The rumen-protected amino acids are fed to a **ruminant** animal with a base **feed** each day beginning approx. 3 wk prior to the scheduled parturition date of the **ruminant** animal and continuing for at most approx. 5 mo into the lactation period of the **ruminant**, wherein the increased amino acid levels are maintained for at least 23 wk after removal of the rumen-protected **feed** additive.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 8 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:394172 HCAPLUS
DOCUMENT NUMBER: 129:40424
TITLE: **Feed** additive for **ruminants**
INVENTOR(S): Morikawa, Takao; Sasaoka, Seiji; Saito, Shigeru; Sugawara, Masato; Muto, Kaoru; Yabuta, Shigenori
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan; Morikawa, Takao; Sasaoka, Seiji; Saito, Shigeru; Sugawara, Masato; Muto, Kaoru; Yabuta, Shigenori
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9824329	A1	19980611	WO 1997-JP4420	19971203
W: AU, CA, NO, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9851362	A1	19980629	AU 1998-51362	19971203
JP 10215789	A2	19980818	JP 1997-348494	19971203
EP 963703	A1	19991215	EP 1997-946083	19971203
R: DE, ES, FR, GB, IT				
CA 2274468	C	20020326	CA 1997-2274468	19971203
US 6203829	B1	20010320	US 1999-319482	19990604
PRIORITY APPLN. INFO.:			JP 1996-342583 A	19961206
			WO 1997-JP4420 W	19971203

AB An additive to **feed** for **ruminants** is prepd. by dispersing physiol. active agents (e.g., amino acids) in protective substance (monocarboxylic acids) such that the physiol. active agents are protected while being transported through the first rumen. For example, a cylindrical pellet (diam. 2 and length 2 mm) contg. 65 % by wt. methionine is protected by a mixt. of palmitic acid and beef fat (20:80), and this is covered by a coating material, selected from the group comprising aliph. monocarboxylic acid salts, polymers sol. in acid but not in neutral region, and zein.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 9 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:426757 HCAPLUS
DOCUMENT NUMBER: 127:135084
TITLE: Lysine deficiency in postweaned calves fed corn and corn gluten meal diets
AUTHOR(S): Abe, Matanobu; Iriki, Tsunenori; Funaba, Masayuki
CORPORATE SOURCE: School Veterinary Medicine, Azabu Univ., Sagamihara, 229, Japan
SOURCE: Journal of Animal Science (1997), 75(7), 1974-1982
CODEN: JANSAG; ISSN: 0021-8812
PUBLISHER: American Society of Animal Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Holstein bull calves (n = 36) weaned at 6 wk of age were used in six trials to examine the response of N balance to postruminal administration of lysine with or without methionine in postweaned calves receiving diets based on corn and corn gluten meal. Calves were younger than 3 mo of age in Trials 1 and 2 but older than 3 mo in Trials 4 to 6. L-**Lysine monohydrochloride** was supplemented with or without DL-methionine twice daily through the reticular groove, except in Trial 4, in which N supplements were infused through duodenal cannulas. L-Glutamine was used as a nonspecific N source in every trial, and casein was a pos. control in Trials 4 and 5. When daily CP intake from the diet was 3.9 g/kg BW, lysine was limiting for calves less than 11 wk of age (Trials 1 and 2) but not limiting for calves greater than 12 wk of age (Trial 3). No amino acid seemed to be limiting for calves greater than 20 wk of age (Trial 4) when daily CP intake was 4.1 g/kg BW, but lysine was limiting when CP intake was restricted to 3.0 g/kg BW when calves were more than 17 wk of age (Trial 5). However, lysine was not limiting above 18 wk of age (Trial 6) when CP intake was increased to 3.8 g/kg BW by adding urea to the diet. Results suggest that lysine may be limiting for corn and corn gluten meal diets only when **ruminal** microbial protein synthesis is restricted.

L16 ANSWER 10 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:375237 HCAPLUS
DOCUMENT NUMBER: 127:64944
TITLE: Granular **ruminant-feed** component containing a physiologically active substance and a

coating layer with laminar structure
INVENTOR(S): Nishimura, Kunio; Morita, Toshio
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: U.S., 11 pp., Cont.-in-part of U.S. 5,571,527.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5635198	A	19970603	US 1995-472916	19950607
JP 05084042	A2	19930406	JP 1991-84778	19910325
JP 2879269	B2	19990405		
AU 9331726	A1	19940719	AU 1993-31726	19921225
AU 671968	B2	19960919		
EP 675686	A1	19951011	EP 1993-900442	19921225
EP 675686	B1	19970702		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
BR 9207183	A	19951114	BR 1992-7183	19921225
ES 2105204	T3	19971016	ES 1993-900442	19921225
RU 2109460	C1	19980427	RU 1995-114364	19921225
US 5571527	A	19961105	US 1994-223178	19940405

PRIORITY APPLN. INFO.:

JP 1991-84778	A	19910325
US 1992-856728	B1	19920324
US 1994-219699	B2	19940330
US 1994-223178	A2	19940405
EP 1993-900442	A	19921225
WO 1992-JP1709	W	19921225

AB A **feed** or **feed** additive granular agent coating layer comprises (a) one or more substances selected from the group consisting of a specific fatty acid or ester thereof, a specific animal or vegetable fat and fatty oil which may be hardened by hydrogenation, and a specific wax, and (b) tabular crystals of a substance which is sparingly water-sol. under a neutral condition but is readily water-sol. under an acidic condition and which has an av. particle size of 5 to 30 .mu.m, wherein said coating layer is present in a coating ratio of 5% by wt. or more and 50% by wt. or less, wherein said first coating material and said second coating material are in a proportion of 3:2 to 1:3 by wt. The granular agent has high mech. strength, increased durability in the rumen and superior soly. and absorption of the physiol. active substance in the abomasum or downstream thereof resulting in increased **ruminant** performance. Thus, **lysine hydrochloride** and beef tallow are used in conjunction with calcium monohydrogen phosphate as coating material (content of physiol. active component: 49%) for soly. in **sheep** rumen.

IT **657-27-2, Lysine hydrochloride**
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(granular **ruminant-feed** component contg. a physiol. active substance and coating layer with laminar structure)

L16 ANSWER 11 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:372603 HCAPLUS
DOCUMENT NUMBER: 127:64943
TITLE: Granular agent for **ruminants** and process for producing the same
INVENTOR(S): Nishimura, Kunio; Morita, Toshio
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. 5,571,527.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5633004	A	19970527	US 1995-480033	19950607
JP 05084042	A2	19930406	JP 1991-84778	19910325
JP 2879269	B2	19990405		
AU 9331726	A1	19940719	AU 1993-31726	19921225
AU 671968	B2	19960919		
EP 675686	A1	19951011	EP 1993-900442	19921225
EP 675686	B1	19970702		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
BR 9207183	A	19951114	BR 1992-7183	19921225
ES 2105204	T3	19971016	ES 1993-900442	19921225
RU 2109460	C1	19980427	RU 1995-114364	19921225
US 5571527	A	19961105	US 1994-223178	19940405

PRIORITY APPLN. INFO.:

JP 1991-84778	A	19910325
US 1992-856728	B1	19920324
US 1994-219699	B2	19940330
US 1994-223178	A2	19940405
EP 1993-900442	A	19921225
WO 1992-JP1709	W	19921225

AB Disclosed is the **feed** or **feed** additive granular agent contg. a physiol. active substance and a coating layer having a laminar structure in which the tabular crystals are arranged in a laminated state. The coating layer comprises (a) one or more substances selected from the group consisting of a specific fatty acid or ester thereof, a specific animal or vegetable fat and fatty oil which may be hardened by hydrogenation, and a specific wax, and (b) tabular crystals of a substance which is sparingly water-sol. under a neutral condition but is readily water-sol. under an acidic condition and which has an av. particle size of 5 to 30 .mu.m, wherein said coating layer is present in a coating ratio of 5% by wt. or more and 50% by wt. or less, wherein said first coating material and said second coating material are in a proportion of 3:2 to 1:3 by wt., and process for producing the same. The granular agent has a high mech. strength, increased durability in the rumen and superiority in soly. and absorption of the physiol. active substance of said agent in the abomasum or downstream thereof resulting in efficient breeding, growth, or lactation of **ruminants**.

L16 ANSWER 12 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:344823 HCAPLUS
DOCUMENT NUMBER: 127:49657
TITLE: Water-insoluble amino acid salt
INVENTOR(S): Meade, Thomas L.
PATENT ASSIGNEE(S): Meade; Thomas L., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5631031	A	19970520	US 1994-260450	19940613

PRIORITY APPLN. INFO.: US 1994-260450 19940613
OTHER SOURCE(S): MARPAT 127:49657

AB Disclosed are water-insol., calcium or magnesium salts of alpha amino acids and a process for their prepn. The process comprises the steps of reacting an alpha-amino-protected alkyl ester of an amino acid with a metal base, thereby forming a water-sol. amino acid salt, followed by

reacting the water-sol. salt with either a calcium or magnesium salt, resulting in the formation of a water-insol. salt of the amino acid. The water-insol. salts can be used as **feed** supplements for **ruminant** animals and to supplement **food** products for human consumption.

IT **13515-95-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(water-insol. amino acid salt for use as **feed** supplement)

L16 ANSWER 13 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:681974 HCAPLUS
DOCUMENT NUMBER: 125:327025
TITLE: Granular agent for **ruminants** and process for producing them
INVENTOR(S): Nishimura, Kunio; Morita, Toshio
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. Ser. No. 219,699, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5571527	A	19961105	US 1994-223178	19940405
JP 05084042	A2	19930406	JP 1991-84778	19910325
JP 2879269	B2	19990405		
AU 9331726	A1	19940719	AU 1993-31726	19921225
AU 671968	B2	19960919		
EP 675686	A1	19951011	EP 1993-900442	19921225
EP 675686	B1	19970702		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
BR 9207183	A	19951114	BR 1992-7183	19921225
ES 2105204	T3	19971016	ES 1993-900442	19921225
RU 2109460	C1	19980427	RU 1995-114364	19921225
US 5633004	A	19970527	US 1995-480033	19950607
US 5635198	A	19970603	US 1995-472916	19950607

PRIORITY APPLN. INFO.:

JP 1991-84778	A	19910325
US 1992-856728	B1	19920324
US 1994-219699	B2	19940330
EP 1993-900442	A	19921225
WO 1992-JP1709	W	19921225
US 1994-223178	A2	19940405

AB Disclosed is a **feed** or **feed** additive granular agent contg. a physiol. active substance and a coating layer having a laminar structure in which the tabular crystals are arranged in a laminated state. The process for producing the **feed** or **feed** additive is also disclosed. The coating layer comprises (a) one or more substances selected from the group consisting of a specific fatty acid or ester thereof, a specific animal or vegetable fat and fatty oil which may be hardened by hydrogenation, and a specific wax, and (b) tabular crystals of a substance which is sparingly water-sol. under neutral conditions but is readily water-sol. under acidic conditions and which has an av. particle size of 5 to 30 .mu.m, wherein said coating layer is present in a coating ratio of 5% by wt. or more and 50% by wt. or less, wherein said first coating material and said second coating material are in a proportion of 3:2 to 1:3 by wt. The granular agent has high mech. strength, increased durability in the rumen and superiority in soly. and absorption of the physiol. active substance of said agent in the abomasum or downstream thereof resulting in efficient breeding, growth, or lactation of **ruminants**.

L16 ANSWER 14 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:111691 HCAPLUS
DOCUMENT NUMBER: 124:144318
TITLE: Central ataractics and **feed** additives containing lysine for **ruminant** animals and
INVENTOR(S): Onodera, Ryoji; Sato, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07309750	A2	19951128	JP 1995-66007	19950324

PRIORITY APPLN. INFO.: JP 1994-56258 19940325

AB The central ataractics contg. Lys as an active ingredient are claimed. The **feed** additives contg. Lys and Lys and/or Met in the forms protected from the action in rumen as active ingredients are also claimed. A method for raising **ruminants** by administration of the central ataractics or the **feed** additives are also claimed. Lys ingested by **ruminants** is converted by rumen microorganism into pipecolic acid, which raises cerebral GABA concn. resulting in suppression of excitation of animals. Feeding of milking **cows** with **feed** contg. rumen-protected Lys and rumen-protected Met increased milk prodn. and stabilize the behavior.

L16 ANSWER 15 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:938296 HCAPLUS
DOCUMENT NUMBER: 123:338081
TITLE: An additive composition for **ruminant feed**.
INVENTOR(S): Kitamura, Nobuoyshi; Shibahara, Susumu; Ikeda, Toru
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 678246	A1	19951025	EP 1995-105930	19950420
R: BE, DE, DK, FR, GB, IT, NL, SE				
JP 07289172	A2	19951107	JP 1994-81500	19940420
NO 9501473	A	19951023	NO 1995-1473	19950419
US 5676966	A	19971014	US 1995-424639	19950419
CA 2147432	AA	19951021	CA 1995-2147432	19950420
CN 1125057	A	19960626	CN 1995-105726	19950420

PRIORITY APPLN. INFO.: JP 1994-81500 19940420

AB A granular additive compn. for **ruminant feed** which stably protects the biol.-active substance in the rumen and allows it be digested and absorbed in the digestive organs after the abomasum is provided, with consideration of safety and economy. This compn. comprises a core of a biol.-active substance (L-lysine-HCl, methionine, etc.) and a coating compn. comprising 68-90 % by wt. hydrophobic protecting substance, such as optionally hardened animal and plant oil and fat or a fatty acid ester, 2-10% surfactant, preferably lecithin, and 8-30 % talc. The granular additive compn. has excellent protecting property in the rumen

and excellent release properties in the digestive organs.

L16 ANSWER 16 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:648215 HCAPLUS
DOCUMENT NUMBER: 123:31798
TITLE: **Feed** additives for **ruminants**
INVENTOR(S): Kitamura, Nobuyoshi; Shibahara, Susumu; Suzuki, Hiromi; Sugano, Naoko; Ikeda, Tooru
PATENT ASSIGNEE(S): Ajinomoto Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07087900	A2	19950404	JP 1993-240029	19930927

PRIORITY APPLN. INFO.: JP 1993-240029 19930927

AB A **feed** is prepd. which remains stable in the first stomach and is digested after being passed through the fourth stomach in **ruminants**. Biol. active substances such as lysine-HCl and methionine are encapsulated with (1) .gtoreq. 1 substance selected from fat/oil and fatty acid esters with m.p. .gtoreq. 40.degree., and (2) .gtoreq. 1 substance selected from carboxylic acids derived from bile, and optionally, (3) .gtoreq. 1 substance selected from lecithins, unsatd. liq. fatty acids and hydrogenated fat/oil and nonionic surfactants that dissolve in fatty acid esters. The encapsulated materials are used as **feed** additives. For example, lysine-HCl (biol. active compd.) was coated with a mixt. of hydrogenated oil 97 and bile fat 3 % by wt. to give a **feed** additive.

L16 ANSWER 17 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:362538 HCAPLUS
DOCUMENT NUMBER: 122:131664
TITLE: Protection of amino acids in **feed** against **ruminal** degradation.
INVENTOR(S): Moncoulon, Raymond; Bayourthe, Corinne
PATENT ASSIGNEE(S): La Noelle Services, Cooperative D'interet Collectif Agricole, Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 628257	A1	19941214	EP 1994-401300	19940609
EP 628257	B1	19971229		
R: AT, BE, DE, DK, ES, FR, GB, IE, IT, NL, PT				
FR 2706253	A1	19941223	FR 1993-7215	19930611
FR 2706253	B1	19950901		
AT 161396	E	19980115	AT 1994-401300	19940609

PRIORITY APPLN. INFO.: FR 1993-7215 19930611

AB Free amino acids in **feed** are protected by complexation with reducing sugars, such as those contained in whey. The complexation is carried out under conditions which allow for Maillard reaction initiation. Thus, a mixt. of lupine meal, lysine-HCl or DL-methionine, and whey, was subjected to hydrothermal treatment, to give a **feed** esp. suitable for lactating **cows**.

L16 ANSWER 18 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:629453 HCAPLUS
DOCUMENT NUMBER: 121:229453
TITLE: Supplementing the amino acid levels in **ruminant** animals.
INVENTOR(S): Rode, Lyle M.; Julien, William E.; Sato, Hiroyuki; Fujieda, Takeshi; Suzuki, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 610957	A2	19940817	EP 1994-102243	19940214
EP 610957	A3	19950802		
EP 610957	B1	20021106		
R: DE, DK, FR, GB, IT, NL, SE				
JP 06237701	A2	19940830	JP 1993-24256	19930212
CA 2115199	AA	19940813	CA 1994-2115199	19940208
CA 2115199	C	19980922		
EP 610952	A2	19940817	EP 1994-102160	19940211
EP 610952	A3	19950802		
R: DE, DK, FR, GB, IT, NL, SE				
CA 2115681	AA	19940817	CA 1994-2115681	19940215
JP 06237702	A2	19940830	JP 1994-18543	19940215
CN 1091905	A	19940914	CN 1994-101589	19940216
CN 1046405	B	19991117		

PRIORITY APPLN. INFO.: JP 1993-24256 A 19930212
US 1993-18250 A 19930216

AB Rumen-protected lysine and/or methionine are added to **feed** beginning 3 wk prior to parturition and continuing .ltoreq.5 mo into lactation. The **feed** supplement increases health, appetite and quantity and quality of milk. The amino acids are rumen-protected by coating with a mixt. of lecithin, an acid-sol. inorg. substance, such as MgCO3, and a substance selected from C14-22 monocarboxylic acids, their salts, hardened animal or vegetable oils, and waxes.

L16 ANSWER 19 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:456255 HCAPLUS
DOCUMENT NUMBER: 121:56255
TITLE: **Feed** additive composition for **ruminants**.
INVENTOR(S): Ueda, Satoshi; Heima, Haruo; Ozawa, Makoto; Nagai, Takeshi; Nakamatsu, Tsuyoshi; Sato, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 588346	A2	19940323	EP 1993-114939	19930916
EP 588346	A3	19940615		
EP 588346	B1	19990210		
R: BE, DE, DK, FR, GB, IT, NL, SE				

JP 06141785	A2	19940524	JP 1993-197052	19930809
CA 2106265	AA	19940318	CA 1993-2106265	19930915
US 5405628	A	19950411	US 1993-122656	19930917

PRIORITY APPLN. INFO.:
JP 1992-248196 19920917
JP 1993-197052 19930809

AB A **feed** additive is made of a coated core of a biol. active substance, such as an amino acid. The additive is stable in the rumen, while allowing for digestion and absorption in the digestive tract. The coating comprises linear or branched satd. or unsatd. aliph. C12-22 monocarboxylic acids, hardened vegetable or animal fats and oils and/or waxes. Further coating components are linear or branched satd. or unsatd. aliph. C<11 monocarboxylic acids and nucleic acids, nucleotides, nucleosides, bases composing nucleic acids and/or their salts. A core was made of L-lysine-HCl 325, talc 172.5, Na CMC 2.5, and water 135 g. The core was coated with a mixt. of hardened beef tallow 88, RNA 2, capric acid 5, and lecithin 5 parts by wt.

L16 ANSWER 20 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:427112 HCAPLUS
DOCUMENT NUMBER: 119:27112
TITLE: Rumen-bypass granules for **ruminants**
INVENTOR(S): Morita, Toshio; Nishimura, Kunio
PATENT ASSIGNEE(S): Showa Denko Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05084042	A2	19930406	JP 1991-84778	19910325
JP 2879269	B2	19990405		
WO 9414335	A1	19940707	WO 1992-JP1709	19921225
W: AU, BR, CA, KR, KZ, RU, UA				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9331726	A1	19940719	AU 1993-31726	19921225
AU 671968	B2	19960919		
EP 675686	A1	19951011	EP 1993-900442	19921225
EP 675686	B1	19970702		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
BR 9207183	A	19951114	BR 1992-7183	19921225
AT 154869	E	19970715	AT 1993-900442	19921225
ES 2105204	T3	19971016	ES 1993-900442	19921225
RU 2109460	C1	19980427	RU 1995-114364	19921225
CA 2142294	C	19980811	CA 1992-2142294	19921225
US 5571527	A	19961105	US 1994-223178	19940405
US 5633004	A	19970527	US 1995-480033	19950607
US 5635198	A	19970603	US 1995-472916	19950607

PRIORITY APPLN. INFO.:
JP 1991-84778 A 19910325
US 1992-856728 B1 19920324
EP 1993-900442 A 19921225
WO 1992-JP1709 W 19921225
US 1994-219699 B2 19940330
US 1994-223178 A2 19940405

AB Granules, which do not release physiol. active substances in the 1st stomach, but release them in the 4th stomach in **ruminants**, comprise nonflowable physiol. active substances coated with (i) C12-22 fatty acids (esters) and/or animal or plant (hydrogenated) fats/oils or waxes (m.p. .gtoreq.40.degree.) and (ii) plate crystals (av. particle size 5-30 .mu.m) which are easily sol. under acidic conditions, but insol. under neutral conditions. The plate crystals form a layer structure in

the coatings of the granules. L-Lys.HCl was granulated with hydrogenated tallow and coated with melted hydrogenated tallow and plate CaHPO4.2H2O to manuf. granules, which relased 17% and 42% Lys under neutral and acidic conditions, resp.

IT **657-27-2, L-Lysine hydrochloride**
RL: BIOL (Biological study)
(**feed** granules contg., coated with fats and plate crystals, rumen-bypass)

L16 ANSWER 21 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:150466 HCAPLUS
DOCUMENT NUMBER: 116:150466
TITLE: Manufacture of **feed** additives for **ruminants**
INVENTOR(S): Sasaoka, Seiji; Aoki, Izuo; Maruyama, Hirotsugu
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03280838	A2	19911211	JP 1990-80806	19900330

PRIORITY APPLN. INFO.: JP 1990-80806 19900330

AB **Feed** additives resistant to gastric digestion are manufd. for **ruminants**. The **feed** additives are protected by coating with fatty acid salts that are sol. in an acidic range, and fats or wax. Methionine and lysine HCl coated with tallow fatty acid Ca salts and hydrogenated tallow oil was prepd.

L16 ANSWER 22 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:150465 HCAPLUS
DOCUMENT NUMBER: 116:150465
TITLE: **Feed** additives for **ruminants**
INVENTOR(S): Sasaoka, Seiji; Aoki, Izuo; Maruyama, Hirotsugu
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03280839	A2	19911211	JP 1990-80807	19900330

PRIORITY APPLN. INFO.: JP 1990-80807 19900330

AB **Feed** additives resistant to gastric degrdn. are manufd. for **ruminants**. The **feed** additives are manufd. as core substances by coating with (1) fatty acid salts that are sol. in an acidic range and fat or wax and (2) titanium oxide. Coating of methionine and lysine HCl with tallow fatty acid Ca salts, hydrogenated tallow oil, and titanium oxide was shown.

L16 ANSWER 23 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:150464 HCAPLUS
DOCUMENT NUMBER: 116:150464
TITLE: Manufacture of **feed** additives for **ruminants**
INVENTOR(S): Sasaoka, Seiji; Aoki, Izuo; Maruyama, Hirotsugu

PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03280840	A2	19911211	JP 1990-80808	19900330
JP 3266608	B2	20020318		

PRIORITY APPLN. INFO.: JP 1990-80808 19900330

AB **Feed** additives suitable for **ruminants** are manufd. as a core that is further coated with a fatty acid salt that is sol. at acidic pH and a water-insol. substance that is sol. in said fatty salt. The additive can bypass the rumen and are degraded in the abomasum to allow absorption of the enclosed nutrients. Methionine and lysine HCl were mixed with tallow fatty acid Ca salt (m.p. 43.degree.) to prep. granules. The granules were coated with a tallow fatty acid Ca salt that was dissolved in hydrogenated castor oil fatty acids. The products were heat-resistant and readily dissolved at the pHs typical of the abomasum and small intestine, after by-passing a rumen-like pH range.

IT **657-27-2, Lysine hydrochloride**
RL: BIOL (Biological study)
(**feed** additive, coating of, for **ruminants**)

L16 ANSWER 24 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:150463 HCAPLUS
DOCUMENT NUMBER: 116:150463
TITLE: Manufacture of **feed** additives for **ruminants**
INVENTOR(S): Sasaoka, Seiji; Aoki, Izuo; Maruyama, Hirotsugu
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03280841	A2	19911211	JP 1990-80809	19900330

PRIORITY APPLN. INFO.: JP 1990-80809 19900330

AB **Feed** additives suitable for **ruminants** are manufd. as a core that is coated with a fatty acid salt that is sol. in acidic pH and a water-insol. substance that is sol. in said fatty salt, followed by another coating with titanium oxide. The additive can bypass the 1st stomach and degrade in the 4th stomach for absorption. Methionine and lysine HCl were mixed with tallow fatty acid Ca salt (m.p. 43.degree.) to prep. granules. The granules were first coated with a tallow fatty acid Ca salt that was dissolved in hydrogenated castor oil fatty acids, and finally coated with titanium oxide. The products were heat-resistant and readily disintegrated in the pH range of the 4th stomach and small intestine environments, after by-passing the 1st-stomach-like pH range.

IT **657-27-2, Lysine hydrochloride**
RL: BIOL (Biological study)
(**feed** additive, coating of, for **ruminants**)

L16 ANSWER 25 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:40130 HCAPLUS
DOCUMENT NUMBER: 116:40130

TITLE: **Feed** additives containing biologically active substances coated with polymer-containing coatings for **ruminants**
INVENTOR(S): Ueda, Satoshi; Nagai, Takeshi; Kobayashi, Takaaki; Okada, Hiroyoshi; Miyake, Masao; Matsuzawa, Satoshi
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Mitsubishi Kasei Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03155756	A2	19910703	JP 1989-294059	19891114

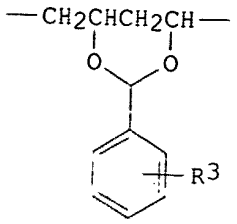
PRIORITY APPLN. INFO.: JP 1989-294059 19891114

AB **Feed** additives comprise biol. active core substances coated with coatings contg. synthetic polymers, which contain 5-50 mol% units CH2CH(OCOCH2NR1R2) [I; R1, R2 = H, alkyl; R1R2 may be (O-contg.) alkylene] and 20-80 mol% units CH2CH(OCOC6H4R3) (II; R3 = H, alkyl, alkoxy), have 0.01-6.0 dL/g reduced viscosity, and are sol. or swellable to H2O at pH .ltoreq.5.5. The biol. active substances are prevented from decompn. at the 1st stomach. A soln. of 19.8 g poly(vinyl alc.) in N-methyl-2-pyrrolidone was esterified with 13.6 g ClCH2COCl, 39.4 g BzCl, and pyridine at 40.degree. for 2 h to give 38.5 g polymer, which (12.0 g) in acetone was aminated with 46 g Et2NH at 70.degree. for 2 h to give 10.7 g acid-sensitive polymer contg. 20 mol% I (R1 = R2 = Et) and 63 mol% II (R3 = H). A mixt. of sucrose, L-lysine.HCl (III), talc, and hydroxypropyl cellulose was granulated and coated with the polymer to prep. a **feed** additive. III kept in the granule at pH 6, while 99.3% III was released at pH 2 in 3 h.

L16 ANSWER 26 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:678549 HCAPLUS
DOCUMENT NUMBER: 115:278549
TITLE: **Feed** additives containing biologically active substances coated with polymer-containing coatings for **ruminants**
INVENTOR(S): Ueda, Satoshi; Nagai, Takeshi; Kobayashi, Takaaki; Okada, Hiroyoshi; Miyake, Masao; Matsuzawa, Satoshi
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Mitsubishi Kasei Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03155757	A2	19910703	JP 1989-294060	19891114

PRIORITY APPLN. INFO.: JP 1989-294060 19891114
GI



II

AB **Feed** additives comprise biol. active core substances coated with coatings contg. synthetic polymers, which contain 5-40 mol% units CH2CH(OCOCH2NR1R2) [I; R1, R2 = H, alkyl; R1R2 may be (O-contg.) alkylene] and 30-80 mol% units II (R3 = H, alkyl, alkoxy), have 0.01-6.0 dL/g reduced viscosity, and are sol. or swellable to H2O at pH .ltoreq.5.5. The biol. active substances are protected from decompn. at the 1st stomach. A soln. of 12.4 g poly(vinyl alc.) in N-methyl-2-pyrrolidone was esterified with 7.06 g ClCH2COCl and pyridine at 50.degree. for 3 h, acetalized with 19.9 g PhCHO and p-MeC6H4SO3H at 50.degree. for 2 h to give 13.4 g polymer, which (11.0 g) in acetone was aminated with 50.5 g morpholine at 70.degree. for 2 h to give 10.6 g acid-sensitive polymer contg. 11 mol% I (R1R2 = morpholino) and 67 mol% II (R3 = H). A mixt. of sucrose, L-lysine.HCl (III), talc, and hydroxypropyl cellulose was granulated and coated with the polymer to prep. a **feed** additive. III was kept in the granule at pH 6, while 79.4% III was released at pH 2 in 3 h.

L16 ANSWER 27 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:614900 HCAPLUS
DOCUMENT NUMBER: 115:214900
TITLE: Method for coating active agents with zein
INVENTOR(S): Ardaillon, Pierre; Franzoni, Christine; Prud'Homme, Christian
PATENT ASSIGNEE(S): Rhone-Poulenc Nutrition Animale, Fr.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 447297	A1	19910918	EP 1991-400612	19910306
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FR 2659231	A1	19910913	FR 1990-2972	19900308
AU 9172673	A1	19910912	AU 1991-72673	19910306
CA 2037782	AA	19910909	CA 1991-2037782	19910307
ZA 9101674	A	19911224	ZA 1991-1674	19910307
JP 04217625	A2	19920807	JP 1991-65313	19910307
SU 1816212	A3	19930515	SU 1991-4894869	19910307

PRIORITY APPLN. INFO.: FR 1990-2972 19900308

AB Alimentary or pharmaceutical active agents are coated with zein by spraying with an aq. emulsion or dispersion of the zein. The emulsion or dispersion is prepd. by mixing an org. solvent contg. the zein and a hydrophobic substances and/or a nonwater sol. polymer and an aq. soln. contg. an emulsifier or its precursor. Stearic acid, zein F4000, and Et cellulose N22 were mixed with BuOH-water (100:20), the mixt. was heated at 72.degree., and soda water was added under agitation to give a homogeneous emulsion. Granules of methionine were spray-coated with the emulsion. The coated granules were stable at pH 6 and 40.degree.. They were also

resistant to liberation in **sheep** rumen.

IT **657-27-2, Lysine hydrochloride**
RL: BIOL (Biological study)
(coating of, with zein emulsion or dispersion)

L16 ANSWER 28 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:581895 HCAPLUS
DOCUMENT NUMBER: 115:181895
TITLE: Coating of solid particles with fatty acid metal salts and the coated particles for rumen bypass **feeds**
INVENTOR(S): Igarashi, Taizo; Matsuda, Naomichi; Onodera, Sho
PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03047523	A2	19910228	JP 1989-178040	19890712

PRIORITY APPLN. INFO.: JP 1989-178040 19890712

AB Solid particles are coated with fatty acid and metal oxide powders, followed by treatment with H2O, to form fatty acid metal salts on the particles. The coated materials show good bioavailability. L-Lysine.HCl particles (400 g, av. particle size 0.5 mm) were coated with 1000 g melted tallow fatty acids, overcoated with slurry contg. 1000 g stearic acid and 180 g CaO, and sprayed with H2O to give coated particles, which released 0.4% L-lysine in artificial rumen soln., vs. 60.3%, when Ca stearate was used instead.

L16 ANSWER 29 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:557604 HCAPLUS
DOCUMENT NUMBER: 115:157604
TITLE: **Feed** additives containing biologically active substances coated with 4-vinylpyridine-styrene copolymer for **ruminants**
INVENTOR(S): Ueda, Satoshi; Nagai, Takeshi; Kobayashi, Takaaki; Itagaki, Koji; Okada, Hiroyoshi; Myake, Masao
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Mitsubishi Kasei Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03058755	A2	19910313	JP 1989-190553	19890725

PRIORITY APPLN. INFO.: JP 1989-190553 19890725

AB **Feed** additives for **ruminants** contain biol. active substances coated with materials contg. (60:40)-(85:15) (by wt.) 4-vinylpyridine-styrene copolymer (I) (reduced viscosity .gtoreq.0.5 dL/g). The coated **feed** additives release less of the biol. active substances in the rumen and more in the abomasum. 4-Vinlpyridine 16.8, styrene 7.2, and AIBN 0.12 g were mixed in dioxane under N at 70.degree. for 24 h to give 99.4% I (reduced viscosity 0.76 dL/g). Granules contg. 10:2:1 lysine palmitate-CaCO3-K-90 [poly(vinylpyrrolidone)] mixt. were sprayed with a mixt of 30% I and 70:30 Al stearate-talc mixt. to manuf. coated granules, which were left in

McDougall buffer (corresponding to rumen juice) for 24 h to retain 95.4% II and in Clark-Lubs buffer (corresponding to abomasum juice) for 2 h to release 93.1% II.

IT **657-27-2, L-Lysine hydrochloride**
RL: BIOL (Biological study)
(**feeds** for **ruminants** contg. vinylpyridine-styrene copolymer-coated, controlled release of)

L16 ANSWER 30 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:486225 HCAPLUS
DOCUMENT NUMBER: 115:86225
TITLE: Somatotropin for increasing fertility in animals
INVENTOR(S): Miller, Lindy F.; Thomford, Peter J.
PATENT ASSIGNEE(S): Pitman-Moore, Inc., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9014100	A2	19901129	WO 1990-US2062	19900417
W: AU, CA, HU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
US 5008244	A	19910416	US 1989-352010	19890515
CA 2058422	AA	19901116	CA 1990-2058422	19900417
AU 9054386	A1	19901218	AU 1990-54386	19900417
AU 642871	B2	19931104		
EP 472534	A1	19920304	EP 1990-906513	19900417
EP 472534	B1	19931208		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
HU 61897	A2	19930329	HU 1990-3564	19900417
AT 98129	E	19931215	AT 1990-906513	19900417
ES 2062520	T3	19941216	ES 1990-906513	19900417

PRIORITY APPLN. INFO.:
US 1989-352010 19890515
EP 1990-906513 19900417
WO 1990-US2062 19900417

AB Methods for increasing fertility in animals and particularly for increasing fertility in **food**-producing animals (cattle, swine, and **sheep**) comprise administering somatotropin to the animals in the finishing phase of growth to increase embryonic survival and litter size during the reproductive stage of growth. Somatotropin is administered parenterally or via other routes at 0.1-20 mg/animal/day. Somatotropin is e.g. .delta.-7 recombinant porcine somatotropin (rpST). Thus, rpST (6 mg/day) injected into gilts for 60 days markedly increased the fertility as reflected by embryonic survival rates (87.9% vs. 26.2% for controls) and other parameters. Pharmaceutical formulations are presented.

IT **1119-34-2, Arginine hydrochloride**
RL: BIOL (Biological study)
(injections contg. somatotropin and, to increase female fertility in swine and other animals)

L16 ANSWER 31 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:162816 HCAPLUS
DOCUMENT NUMBER: 114:162816
TITLE: Copper complexes of alpha-amino acids that contain terminal amino groups, and their use as nutritional supplements
INVENTOR(S): Abdel-Monem, Mahmoud M.; Anderson, Michael Dean
PATENT ASSIGNEE(S): Zinpro Corp., USA

SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 377526	A2	19900711	EP 1990-400004	19900102
EP 377526	A3	19910417		
EP 377526	B1	19951227		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
US 4900561	A	19900213	US 1989-293225	19890103
US 4948594	A	19900814	US 1989-396685	19890822

PRIORITY APPLN. INFO.: US 1989-293225 19890103
US 1989-396685 19890822
US 1988-285593 19881216
US 1989-285593 19891216

OTHER SOURCE(S): MARPAT 114:162816

AB Copper complexes of .alpha.-amino acids (markush structure given) that can supply copper for good growth and yield prodn. of livestock are described. Complexes with copper to .alpha.-amino acid ratio of 1:1 and 1:2 were prepd. from **lysine** monohydrate or **monohydrochloride** and copper sulfate pentahydrate.

L16 ANSWER 32 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:422562 HCAPLUS
DOCUMENT NUMBER: 113:22562
TITLE: Coating agents for delayed-release oral compositions for **ruminants**
INVENTOR(S): Itoh, Kunio; Sugiyama, Kiyoshi; Ohta, Motohiro
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 336713	A2	19891011	EP 1989-303321	19890404
EP 336713	A3	19900124		
EP 336713	B1	19921216		
R: DE, FR, GB, NL				
AU 8932324	A1	19891012	AU 1989-32324	19890331
AU 618589	B2	19920102		
US 5080917	A	19920114	US 1989-333170	19890403
JP 02023835	A2	19900126	JP 1989-85116	19890404
CA 1339195	A1	19970805	CA 1989-595596	19890404

PRIORITY APPLN. INFO.: JP 1988-83887 19880405

AB The delayed-release coating agent comprises a veterinary-acceptable, water-sol., synthetic high mol. wt. compd. and ethylcellulose. It is stable in the first stomach of **ruminants** (pH 6.0) yet effectively disintegrates in the fourth stomach (pH 3.0). Furthermore, the delayed release coating agent comprises .gtoreq.1 substance miscible with the high mol. wt. compd. and ethylcellulose and is insol. in water. DL-Methionine was coated with a mixt. of ethylcellulose, stearic acid, and AEA (4:2:3, wt./wt.), Myvacet distd. acetylated monoglyceride type 9-40, and Mg stearate. Granules of methionine were spray-coated in a fluidized bed process to provide coated granules contg. 90 wt./wt.% methionine. Compared with uncoated methionine and methionine coated with other coating

compn., the delayed release coating agent-coated methionine disintegrated faster in pH 3.0 and showed better resistance to dissoln. in pH 6.0. In a feeding expt. on **sheep**, the coated DL-methionine increased the methionine concn. in the blood by .apprx.27% compared to the uncoated compn.

L16 ANSWER 33 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:631036 HCAPLUS
DOCUMENT NUMBER: 111:231036
TITLE: Fat coating of amino acids to be used for **food** and **feed** additives
INVENTOR(S): Iwanami, Koichi; Ito, Masaji
PATENT ASSIGNEE(S): Nippon Oils and Fats Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 64002554	A2	19890106	JP 1987-154398	19870623
US 5008118	A	19910416	US 1988-208996	19880617

PRIORITY APPLN. INFO.: JP 1987-154398 19870623

AB Amino acids to be used as **food/feed** additives are coated for their protection from gastric degrdn. (e.g. in the 1st rumen of **ruminant** animals). The coating agent comprises fat having m.p. >40.degree.. Coating of lysine.HCl with hydrogenated soy oil powder was demonstrated. The coated lysine.HCl shaken in 37.degree. water released 50.6% after 120 min compared to 100% release using a prior art prepn.

L16 ANSWER 34 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:593387 HCAPLUS
DOCUMENT NUMBER: 111:193387
TITLE: Basic amino acid carbamate-containing **feeds** for **ruminants**
INVENTOR(S): Okada, Hiroyoshi; Miyake, Masao; Kobayashi, Takaaki; Tosa, Takafumi
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Mitsubishi Kasei Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63245641	A2	19881012	JP 1987-80279	19870401

PRIORITY APPLN. INFO.: JP 1987-80279 19870401

AB Cores contg. basic amino acid carbamates and .gtoreq.1 biol. active substances are coated with .gtoreq.1 sol. or swelling synthetic polymers for use as **feed** additives for **ruminants**. The prepns. are resistant to degrdn. by the 1st stomach but are readily absorbed by the 4th stomach. L-Lysine fumarate and L-lysine carbamate were mixed with talc and polyvinylpyrrolidone to prep. particles that were subsequently coated with vinylpyridine-styrene copolymer.

L16 ANSWER 35 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:495932 HCAPLUS
DOCUMENT NUMBER: 111:95932
TITLE: Coated physiologically active substances as

feed additives for **ruminants**
INVENTOR(S): Iijima, Hitoshi; Kiuchi, Masayuki; Nakao, Masahiro; Nishimura, Kunio; Sato, Shigeaki
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01010947	A2	19890113	JP 1987-162451	19870701
JP 05081222	B4	19931111		
US 4948589	A	19900814	US 1989-293783	19890105

PRIORITY APPLN. INFO.: JP 1987-162451 19870701

AB Title **feed** additives contg. 30-70% water-sol. (.gtoreq.30g/100 g) or deliquescent physiol. active substances and 10-45% protective substances are manufd. by making granules of moderately slow-releasing property composed of 40-80% of the physiol. active substances, 5-30% of the protective substances, soly. controllers, and granulation additives, then coating the granules with a film contg. 50-98% of the protective substances and 2-50% the granulation additives, with the protective substances in the film controlled at 5-20% of the granules in whole. The physiol. active substances in the coated additives are selectively absorbed in the 4th stomach and the intestines of a **ruminant**. Thus, choline chloride (I) 1400, MgO 740, talc 430, and tallow 350 g were granulated at 70.degree. and 2000 g of the 12-32 mesh granules was coated with 400 g tallow and 115 g MgCO3 at 55.degree.. The granules released 19% I in the 1st stomach juice and 90% I in the 4th stomach juice when tested in artificial bovine gastric juices while the initial granules alone released 99% I in the 1st stomach juice.

L16 ANSWER 36 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:160374 HCAPLUS
DOCUMENT NUMBER: 110:160374
TITLE: Compositions for coating feedstuff additives for **ruminants**, and feedstuff additives so coated
INVENTOR(S): Ardaillon, Pierre; Autant, Pierre; Bourrain, Paul; Cartillier, Andre
PATENT ASSIGNEE(S): Rhone-Poulenc Sante, Fr.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 260186	A2	19880316	EP 1987-401973	19870903
EP 260186	A3	19881221		
EP 260186	B1	19920304		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
FR 2603458	A1	19880311	FR 1986-12412	19860904
FR 2603458	B1	19901102		
US 4877621	A	19891031	US 1987-92139	19870902
AU 8777794	A1	19880310	AU 1987-77794	19870903
AU 613873	B2	19910815		
JP 63063350	A2	19880319	JP 1987-219276	19870903
JP 2546852	B2	19961023		
ZA 8706578	A	19880525	ZA 1987-6578	19870903

HU 45402	A2	19880728	HU 1987-3944	19870903
HU 196310	B	19881128		
AT 72938	E	19920315	AT 1987-401973	19870903
SU 1748630	A3	19920715	SU 1987-4203248	19870903
ES 2029483	T3	19920816	ES 1987-401973	19870903
CA 1324958	A1	19931207	CA 1987-546025	19870903
PRIORITY APPLN. INFO.:			FR 1986-12412	19860904
			EP 1987-401973	19870903

AB Compns. for coating biol. active agents, which are to be administered to **ruminants**, are stable at a pH of .gtoreq.5 and release the active ingredient at a pH of <3.5, and contain a copolymer contg. an aminated base and a hydrophobic substance with a m.p. of >60.degree.; the coating contains 50-90% hydrophobic substance. Methionine granules 350 g were coated in a fluidized bed with a coating compn. prepd. from stearic acid 88 and styrene-(2-vinylpyridine) copolymer (30:70) 22 g, in a soln. contg. 1,2-dichloroethane 500, EtOH 500, and antistatic (Labrasol) 3 mL. The granules contained 72.9% methionine. At pH 6, 1.3% of the methionine was released after 6 h and 2.9% was released after 24 h, and at pH 2, 82.0% was released after 15 min, 84% after 30 min, and 100% after 60 min.

L16 ANSWER 37 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:38026 HCAPLUS
DOCUMENT NUMBER: 110:38026
TITLE: Polymer-coated basic amino acid salts and alkali metal or alkaline earth carboxylates and their use as **ruminant feed** additives
INVENTOR(S): Itagaki, Koji; Okada, Hiroyoshi; Miyake, Masao; Kobayashi, Takaki; Sato, Hiroyuki
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Mitsubishi Chemical Industries Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63098359	A2	19880428	JP 1986-243729	19861014
PRIORITY APPLN. INFO.:			JP 1986-243729	19861014

AB Title compns. are manufd. by coating a core contg. .gtoreq.1 basic amino acid salts and carboxylic acid alkali or alk. earth metal salts with a synthetic polymer which is dissolved or swollen in H2O at pH .ltoreq.5. The amino acids thus prepd. possess a sp. gr. close to that of the **ruminant** juice (1.1.apprx.1.2), longer exposure to which causes degrdn. of the nutrients. The sp. gr. assures that the amino acids move along with the other diet components and are absorbed in the intestines. A mixt. of L-lysine.HCl, Ca stearate I, and poly(vinyl pyrrolidone) was kneaded with H2O, granulated, and then coated with a compn. contg. styrene-4-vinylpyridine copolymer, Al powder, talc, stearic acid, and EtOH. The resulting pellets were shaken in a Mcdougall buffer (to simulate 1st stomach conditions) at 39.degree. for 24 h or in a Clark-Lubs buffer (to simulate 4th stomach conditions) at 39.degree. for 2 h to show 95.0% retention and 100.0% release of lysine, resp., vs. 28.0% and 100.0%, resp., with a control contg. no I.

L16 ANSWER 38 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:533070 HCAPLUS
DOCUMENT NUMBER: 107:133070
TITLE: **Feed** additives for **ruminants**
INVENTOR(S): Shigeta, Takuo; Ota, Motohiro; Ito, Kunio
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61088844	A2	19860507	JP 1984-209275	19841005

PRIORITY APPLN. INFO.: JP 1984-209275 19841005

AB Biol. active substance-contg. core substances are coated with a coating material contg. synthetic high-mol.-wt. substances (that are sol. in H2O at pH <5) and at least 1 compd. selected from fats, waxes, C14-40 (un)satd. aliph. hydrocarbons, C14-32 (un)satd. aliph. alcs. and C14-37 (un)satd. fatty acids to form a **feed** additive for **ruminants**. The additive is stable in the 1st stomach chamber and is readily absorbed by the 4th chamber. Thus, lysine-HCl (20 kg) was mixed with 7 kg 6% hydroxypropyl cellulose in H2O-EtOH (1:1) and made into granules, which were spray-coated with a compn. contg. stearic acid 48, AEA 23, and talc 9 parts.

IT **657-27-2**, **Lysine hydrochloride**
RL: BIOL (Biological study)
(coated, as **feed** additive for **ruminants**)

L16 ANSWER 39 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:513968 HCAPLUS
DOCUMENT NUMBER: 105:113968
TITLE: **Feed** additives for **ruminants**
INVENTOR(S): Morita, Osamu; Ota, Motohiko; Shimaguchi, Naotake; Ito, Kunio
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61088843	A2	19860507	JP 1984-209274	19841005

PRIORITY APPLN. INFO.: JP 1984-209274 19841005

AB Biol. active substance-contg. core substances are coated with a coating material contg. synthetic high-mol.-wt. substances (that are sol. in H2O at pH <5) and ethylcellulose to form **feed** additives for **ruminants**. The **feed** additives are stable in the 1st stomach chamber and are readily absorbed by the 4th chamber. Thus, lysine-HCl (2000 g) was mixed with 0.7 kg 6% hydroxypropyl cellulose in H2O-EtOH (1:1) and made into granules, which were spray-coated with a coating material contg. 850 g ethylcellulose-Eudragit E 100 (5:1) and 18 kg CH2Cl2-EtOH (1:1).

IT **657-27-2**
RL: BIOL (Biological study)
(coated, as **feed** additive for **ruminants**)

L16 ANSWER 40 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1981:531161 HCAPLUS
DOCUMENT NUMBER: 95:131161
TITLE: Controlled-release **feed** additives for **ruminants**. I. Cellulose-based coating compositions for rumen-stable nutrients
AUTHOR(S): Wu, Stephen H.; Dannelly, Clarence C.; Komarek, Ronald

J.
CORPORATE SOURCE: Res. Lab., Tennessee Eastman Co., Kingsport, TN, 37662, USA
SOURCE: Controlled Release Pestic. Pharm., [Proc. Int. Symp.], 7th (1981), Meeting Date 1980, 319-31. Editor(s): Lewis, Danny H. Plenum: New York, N. Y. CODEN: 46CQAI
DOCUMENT TYPE: Conference
LANGUAGE: English

AB A coating of cellulose propionate morpholinobutyrate [70726-37-3] can protect a core of nutrients or pharmaceuticals from rumen microbe decompn. at pH 5.5 for .gtoreq.24 h and will dissolve in pH 3 abomasal fluid in approx. 1 h. Pellets of 88% DL-methionine [59-51-8] with cellulose, Me cellulose, and gum arabic adjuvants were formed by kneading with H2O and extrusion. Pellets of lysine-HCl [**657-27-2**] were prepd. with CaCO3 to neutralize the HCl. The pellets were spray coated with the cellulose ether (6% in Me2CO), optionally with Al hydroxydioleate [36362-00-2] to control water permeability and coating swelling; optimum properties were obtained with a 1:1 mixt. of the cellulose ether and Al compd. In vivo and in vitro expts. indicated the effectiveness of the coating polymer.

IT **657-27-2**
RL: BIOL (Biological study)
(coating of pellets contg., for rumen protection)

L16 ANSWER 41 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:566419 HCAPLUS
DOCUMENT NUMBER: 93:166419
TITLE: Animal **feeds**
INVENTOR(S): Chassin, Andre; Francois, Andre C.; Leroy, Francoise A. J.; Rodeaud, Jacques; Zelter, Zelmen
PATENT ASSIGNEE(S): Aussedat-Rey, Fr.; Institut National de la Recherche Agronomique
SOURCE: U.S., 22 pp. Cont.-in-part of U.S. Ser. No. 845,902. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4211795	A	19800708	US 1974-532153	19741224
PRIORITY APPLN. INFO.:			FR 1965-4208	19650203
			FR 1965-4787	19650203
			US 1966-524837	19660203
			US 1969-845902	19690729

AB **Feeds** contg. proteins are protected from rumen digestion by treating with an org. tanning substance, which is dissocd. from the protein in the lower regions of the digestive tract. In examples, peanut cake, sunflower cake, soybean cake, casein, powd. milk, blood meal, fish meal, meat meal, L-lysine-HCl [**657-27-2**], and rape cake, were protected from rumen digestion by treatment with chestnut tannin, quebracho tannin, H2CO [50-00-0], glyoxal [107-22-2], or glutaraldehyde [111-30-8].

IT **657-27-2**
RL: PROC (Process)
(tanning of, for **ruminant feed**)

L16 ANSWER 42 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:196755 HCAPLUS
DOCUMENT NUMBER: 92:196755
TITLE: Nitrogen balance responses and abomasal lysine levels

in wethers fed supplemental polymerized **L-lysine hydrochloride**

AUTHOR(S): Amos, H. E.; Evans, J. J.; Burdick, D.
CORPORATE SOURCE: Richard B. Russell Agric. Res. Cent., Sci. Educ. Adm., Athens, GA, 30604, USA
SOURCE: Journal of Animal Science (Savoy, IL, United States) (1980), 50(2), 315-22
CODEN: JANSAG; ISSN: 0021-8812
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three trials were conducted to det. the in vivo stability and availability of lysine (lys) [56-87-1] present in polymers prepd. from L-lys-HCl, urea, and H2CO. In trial 1, the molar ratios of L-lys-HCl, urea, and H2CO were varied: 0.25:0.75:1 (polymer 2), 0.4:0.6:1 (polymer 2A), and 0.5:0.5:1 (polymer 2B), resp. These polymers were fed to mature rumen- and abomasum-cannulated wethers in a 4 .times. 4 Latin square expt. to provide a daily intake of 4.8, 4.7, and 4.6 g L-lys for polymers 2, 2A, 2B, resp., above the control (no supplemental lys) treatment. The lys recovered from abomasal digesta was 4.1 (control), 7.8 (2), 7.7 (2A), and 7.6 (2B) g/day. Varying the ratios of lys to urea in the polymers had no effect on the quantity of lys reaching the abomasum. Lys as a percentage of the total trichloroacetic acid precipitable protein was increased by feeding the polymers. In N balance trials, N retained (g/day) was increased in wethers receiving 4.0 g L-lys by abomasal infusion compared to control (no supplemental lys) and increased by the addn. of the polymer to the control diet; a portion of this increase was due to increased N intake from the polymer. Fecal N excretion was highest in wethers fed the polymers but excretion of lys in the feces was not affected by treatment. In anther N balance trial, the infusion of urea into the abomasum increased N retention, as did lys + urea. There was no difference in N retained by wethers receiving lys + urea by abomasal infusion and lys + urea in polymer 2 when N intake was equal. Concns. (.mu.mol/100 mL) of plasma lys were increased by supplemental lys, and equal responses were obtained by infusing 2.1 g lys and feeding 4.2 g lys in the polymer. Approx. 50% of the lys fed in the polymer reached the lower gastrointestinal tract and was absorbed.

L16 ANSWER 43 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:40143 HCAPLUS
DOCUMENT NUMBER: 92:40143
TITLE: Biologically active components protected or encapsulated for **ruminant feed**
PATENT ASSIGNEE(S): Hispano Quimica S. A., Spain
SOURCE: Span., 47 pp.
CODEN: SPXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Spanish
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ES 476566	A3	19790616	ES 1979-476566	19790104

PRIORITY APPLN. INFO.: ES 1979-476566 19790104

AB Nutrients for **ruminants** are protected from degrdn. in the rumen by encapsulation in a mixt. of animal fat and hydrogenated vegetable oil. Thus, a mixt. of DL-methionine [59-51-8] 39.1, kaolin 14.7, stearic acid [57-11-4] 44.0, and hydrogenated vegetable oil (Setsquick) 2.2% was encapsulated by using an extrusion centrifuge. The product was pellets of 1000-1200 .mu. diam. and d. 1.1-1.2 g/mL. When weaned bulls were fed 10 g encapsulated methionine per day, plasma methionine concn. increased .apprx.3-fold in 4 days. No change in plasma methionine was obsd. when the same amt. of free methionine was added to the diet.

IT **657-27-2**
RL: PROC (Process)
(microencapsulation of, for **ruminant feed**)

L16 ANSWER 44 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:404372 HCAPLUS
DOCUMENT NUMBER: 91:4372
TITLE: Pills for oral delivery in **ruminants**
INVENTOR(S): Dannelly, Clarence C.; Ardell, Richard Earl
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2838308	A1	19790322	DE 1978-2838308	19780901
DE 2838308	C2	19861127		
US 4196187	A	19800401	US 1977-830282	19770902
FR 2401619	A1	19790330	FR 1978-23749	19780811
FR 2401619	B1	19830225		
CA 1110167	A1	19811006	CA 1978-309174	19780811
CA 1104494	A1	19810707	CA 1978-309691	19780821
GB 2005537	A	19790425	GB 1978-35165	19780831
GB 2005537	B2	19820630		
SE 7809223	A	19790303	SE 1978-9223	19780901
SE 437601	B	19850311		
SE 437601	C	19850620		
JP 54046824	A2	19790413	JP 1978-106348	19780901
JP 62041203	B4	19870902		
AU 7839468	A1	19800306	AU 1978-39468	19780901
AU 526756	B2	19830127		
CH 633687	A	19821231	CH 1978-9233	19780901

PRIORITY APPLN. INFO.: US 1977-830282 19770902
US 1977-830299 19770902

AB Tablets for oral administration to **ruminants** consist of a core, compounded with a suitable basic material of pH >5.5 and coated with a polymer that resists dissoln. in the first stomach but is dissolved in the fourth stomach. Thus, lysine-HCl [**657-27-2**]was compounded with basic Mg carbonate, cellulose, and gum arabic, and was pelleted, and coated with a 1:1 mixt. of 2-methyl-5-vinylpyridine-styrene copolymer [24938-40-7] and Al dioleate [36362-00-2].

IT **657-27-2**
RL: BIOL (Biological study)
(tabletting of, for administration to **ruminants**)

L16 ANSWER 45 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:72542 HCAPLUS
DOCUMENT NUMBER: 90:72542
TITLE: Carbon-13 NMR of the amorphous polymer of lysine-formaldehyde-urea
AUTHOR(S): Barton, Franklin E., II; Himmelsbach, David S.; Amos, Henry E.
CORPORATE SOURCE: Richard B. Russell Agric. Res. Cent., Sci. Educ. Adm., Athens, GA, USA
SOURCE: Journal of Agricultural and Food Chemistry (1979), 27(1), 140-5
CODEN: JAFCAU; ISSN: 0021-8561
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A peak at 44.6 ppm in the 13C NMR of formaldehyde-L-**lysine monohydrochloride**-urea copolymer (I) [**65436-69-3**], detd. as a solid or in soln., was assigned to the .epsilon.-C of lysine (II), the N of which is bonded to CH2 or other HCHO-derived fragments. I aged 2.5 days contains 65% free II, while I prepd. in the presence of 1 equiv. NaOH contains 21% free II regardless of age. Hydrolysis of I in 1.0N DCl under conditions similar to those in a **ruminant** abomasum yields free II.

IT **65436-69-3**
RL: PRP (Properties)
(carbon-13 NMR of, structure and hydrolysis in relation to)

L16 ANSWER 46 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:405005 HCAPLUS
DOCUMENT NUMBER: 89:5005
TITLE: Abomasal levels of lysine and methionine in wethers fed polymerized **L-lysine hydrochloride** and polymerized L-methionine
AUTHOR(S): Amos, H. E.; Evans, J. J.
CORPORATE SOURCE: Field Crops Util. Mark. Res. Lab., ARS, Athens, GA, USA
SOURCE: Journal of Animal Science (Savoy, IL, United States) (1978), 46(3), 778-86
CODEN: JANSAG; ISSN: 0021-8812
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three expts. were conducted with rumen- and abomasum-cannulated wethers to det. the effects of feeding a lysine-urea-formaldehyde polymer (lysine polymer) [**65436-69-3**], a methionine-urea-formaldehyde polymer (methionine polymer) [66593-09-7] or a lysine-methionine-urea-formaldehyde polymer (lysine-methionine polymer) [**66593-10-0**] on the daily quantities of crude protein, lysine [56-87-1] and methionine [63-68-3] reaching the abomasum. In expts. 1 and 2, the wethers were fed a basal diet plus either L-lysine from L-lysine-HCl or the lysine polymer. Crude protein (CP) in the liq. and total abomasal digesta were not affected by the lysine polymer; however, CP in the solid digesta was increased (P<10) by the polymer (Expt. 1). Similar overall results were obtained in total CP reaching the abomasum in Expt. 2; but CP was increased in the liq. digesta (P<10) while CP in the solid digesta was unaffected by treatment. Feeding the lysine polymer in Expts. 1 and 2 significantly increased total daily abomasal lysine but feeding free L-lysine-HCl did not. In Expt. 3, total lysine reaching the abomasum was increased (P<05) in wethers fed the lysine polymer or the lysine-methionine polymer. There was a trend for increased abomasal methionine in wethers fed the methionine polymer and lysine-methionine polymer, but due to high animal variation within treatment the increases were not significant. Essential amino acids in the plasma were not affected in wethers fed the lysine polymer, even though there appeared to be more lysine available for absorption.

IT **65436-69-3 66593-10-0**
RL: BIOL (Biological study)
(lysine and methionine metab. in rumen of **sheep** in relation to dietary)

L16 ANSWER 47 OF 47 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:131940 HCAPLUS
DOCUMENT NUMBER: 80:131940
TITLE: Animal fat in low-roughage diets for **ruminants**. Effects of nitrogen source and an amino acid supplement
AUTHOR(S): Buchanan-Smith, J. G.; Macleod, G. K.; Mowat, D. N.
CORPORATE SOURCE: Univ. Guelph, Guelph, ON, Can.
SOURCE: Journal of Animal Science (Savoy, IL, United States)

(1974), 38(1), 133-9
CODEN: JANSAG; ISSN: 0021-8812
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A ground shelled corn basal diet which was balanced to maintain a const. gross energy (GE) to crude protein (CP) ratio (0.30 to 0.31 Mcal/kg GE/% CP) between exptl. diets. The factorial design of treatments included 0 to 5% animal fat, soybean meal, or urea and 0 or added amino acids (methionine hydroxy analog and L-lysine-HCl). Animal fat added to either urea or soybean meal diets did not affect av. daily gain or **feed** gain ratios of steers. Added fat increased intake of soybean meal diets by 10% but decreased intake of urea diets by 5%. The improvement in av. daily gain through feeding soybean meal compared to urea was greater for diets in which the fat and amino acid supplements were added sep. rather than in combination or omitted. Feeding diets contg. added fat resulted in greater carcass backfat and liver fat concns. In lamb balance trials, all digestion coeffs. except acid detergent fiber were greater for diets contg. urea than for soybean meal. Higher digestion coeffs. were obtained when fat and amino acids were fed sep. rather than in combination or omitted.

IT **657-27-2**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metab. of, by **ruminants**, fats and roughage effect on)

=> select hit rn l12 1-16
E1 THROUGH E7 ASSIGNED

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E8 THROUGH E12 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 18:56:51 ON 16 JUN 2003
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DICTIONARY FILE UPDATES: 15 JUN 2003 HIGHEST RN 531490-82-1

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Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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1 1119-34-2/BI

(1119-34-2/RN)
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1 330795-57-8/BI
(330795-57-8/RN)
1 51298-62-5/BI
(51298-62-5/RN)
1 657-27-2/BI
(657-27-2/RN)
1 65436-69-3/BI
(65436-69-3/RN)
1 1119-34-2/BI
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(13515-95-2/RN)
1 66593-10-0/BI
(66593-10-0/RN)

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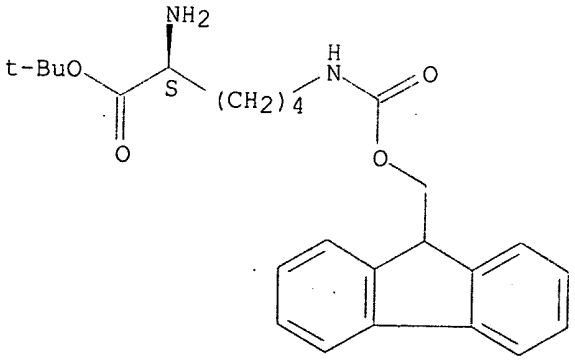
L17 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **330795-57-8** REGISTRY
CN L-Lysine, N6-[(9H-fluoren-9-ylmethoxy)carbonyl]-, 1,1-dimethylethyl ester, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C25 H32 N2 O4 . Cl H
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



HCl

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

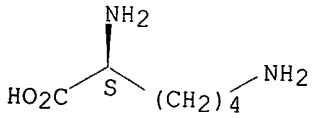
REFERENCE 1: 134:249215

L17 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **66593-10-0** REGISTRY
CN L-Lysine, monohydrochloride, polymer with formaldehyde, L-methionine and urea (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Formaldehyde, polymer with L-lysine monohydrochloride, L-methionine and urea (9CI)
CN L-Methionine, polymer with formaldehyde, L-lysine monohydrochloride and urea (9CI)
CN Urea, polymer with formaldehyde, L-lysine monohydrochloride and L-methionine (9CI)
OTHER NAMES:
CN L-Lysine hydrochloride-L-methionine-urea-formaldehyde polymer
FS STEREOSEARCH
MF (C6 H14 N2 O2 . C5 H11 N O2 S . C H4 N2 O . C H2 O . Cl H)x
CI PMS
PCT Amino resin, Polyamide, Polyamide formed
LC STN Files: CA, CAPLUS

CM 1

CRN 657-27-2 (56-87-1)
CMF C6 H14 N2 O2 . Cl H

Absolute stereochemistry.

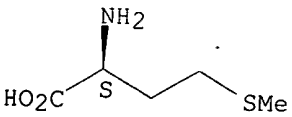


● HCl

CM 2

CRN 63-68-3
CMF C5 H11 N O2 S

Absolute stereochemistry.



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CRN 57-13-6
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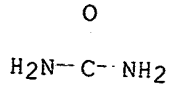
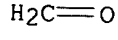


CM 4

CRN 50-00-0
CMF C H2 O



2 REFERENCES IN FILE CA (1957 TO DATE)
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 93:202990

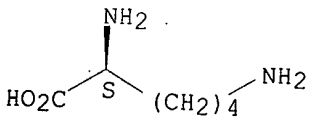
REFERENCE 2: 89:5005

L17 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **65436-69-3** REGISTRY
CN L-Lysine, monohydrochloride, polymer with formaldehyde and urea (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Formaldehyde, polymer with L-lysine monohydrochloride and urea (9CI)
CN Urea, polymer with formaldehyde and L-lysine monohydrochloride (9CI)
OTHER NAMES:
CN Formaldehyde-L-lysine monohydrochloride-urea copolymer
CN L-Lysine hydrochloride-urea-formaldehyde polymer
FS STEREOSEARCH
MF (C6 H14 N2 O2 . C H4 N2 O . C H2 O . Cl H)x
CI PMS
PCT Amino resin, Polyamide, Polyamide formed
LC STN Files: CA, CAPLUS

CM 1

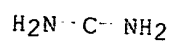
CRN 657-27-2 (56-87-1)
CMF C6 H14 N2 O2 . Cl H

Absolute stereochemistry.



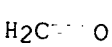
CM 2

CRN 57-13-6
CMF C H4 N2 O



CM 3

CRN 50-00-0
CMF C H2 O



4 REFERENCES IN FILE CA (1957 TO DATE)
4 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 93:202990

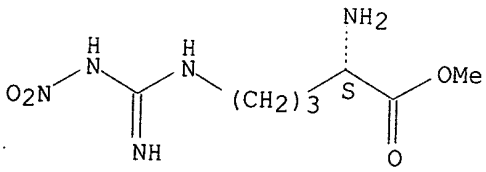
REFERENCE 2: 90:72542

REFERENCE 3: 89:5005

REFERENCE 4: 88:151058

L17 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **51298-62-5** REGISTRY
CN L-Ornithine, N5-[imino(nitroamino)methyl]-, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)
OTHER NAMES:
CN NG-Nitroarginine methyl ester hydrochloride
CN Nitroarginine methyl ester hydrochloride
FS STEREOSEARCH
DR 158321-17-6, 62680-89-1, 117175-74-3
MF C7 H15 N5 O4 . Cl H
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (50903-99-6)

Absolute stereochemistry.



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74 REFERENCES IN FILE CA (1957 TO DATE)
74 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 137:329273

REFERENCE 2: 137:221794

REFERENCE 3: 137:221758

REFERENCE 4: 137:221756

REFERENCE 5: 137:221754

REFERENCE 6: 137:198822

REFERENCE 7: 137:94010

REFERENCE 8: 136:295093

REFERENCE 9: 136:145131

REFERENCE 10: 135:358150

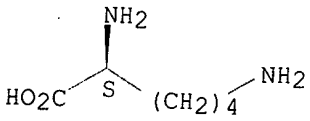
L17 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **26124-78-7** REGISTRY
CN L-Lysine, monohydrochloride, homopolymer (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Lysine, monohydrochloride, L-, peptides (8CI)
OTHER NAMES:
CN Poly(lysine hydrochloride)
FS STEREOSEARCH
MF (C6 H14 N2 O2 . Cl H)x
CI PMS, COM
PCT Polyamide, Polyamide formed
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, MSDS-OHS, TOXCENTER, USPATFULL

RELATED POLYMERS AVAILABLE WITH POLYLINK

CM 1

CRN 657-27-2 (56-87-1)
CMF C6 H14 N2 O2 . Cl H

Absolute stereochemistry.



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28 REFERENCES IN FILE CA (1957 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
28 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 136:74340

REFERENCE 2: 130:316624

REFERENCE 3: 128:275105

REFERENCE 4: 123:316322

REFERENCE 5: 123:57027

REFERENCE 6: 121:158185

REFERENCE 7: 120:297185

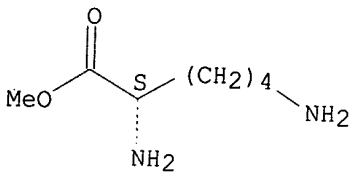
REFERENCE 8: 120:144143

REFERENCE 9: 119:28592

REFERENCE 10: 118:175832

L17 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **13515-95-2** REGISTRY
CN L-Lysine, methyl ester, monohydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Lysine, methyl ester, monohydrochloride, L- (8CI)
OTHER NAMES:
CN Methyl L-lysinate hydrochloride
FS STEREOSEARCH
MF C7 H16 N2 O2 . Cl H
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMLIST, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
CRN (687-64-9)

Absolute stereochemistry.



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15 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 137:338137

REFERENCE 2: 137:185836

REFERENCE 3: 134:147152

REFERENCE 4: 131:185060

REFERENCE 5: 127:49657

REFERENCE 6: 126:186062

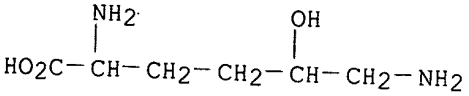
REFERENCE 7: 124:233151

REFERENCE 8: 122:161369

REFERENCE 9: 118:60079

REFERENCE 10: 115:159712

L17 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **13204-98-3** REGISTRY
CN Lysine, 5-hydroxy-, monohydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN DL-Lysine, 5-hydroxy-, monohydrochloride
CN Lysine, 5-hydroxy-, monohydrochloride, DL- (8CI)
OTHER NAMES:
CN 5-Hydroxy-DL-lysine hydrochloride
DR 2219-28-5, 91447-56-2, 32685-69-1
MF C6 H14 N2 O3 . Cl H
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, MSDS-OHS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (6000-08-4)



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7 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:183234

REFERENCE 2: 138:105920

REFERENCE 3: 129:75975

REFERENCE 4: 128:244336

REFERENCE 5: 87:50928

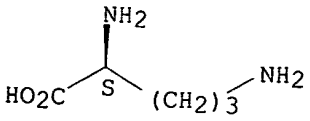
REFERENCE 6: 84:133493

REFERENCE 7: 74:39709

L17 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **3184-13-2** REGISTRY
CN L-Ornithine, monohydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ornithine, monohydrochloride, L- (8CI)
OTHER NAMES:
CN L-Ornithine hydrochloride
CN Ornithine hydrochloride
CN Ornithine monohydrochloride
FS STEREOSEARCH
DR 68274-41-9
MF C5 H12 N2 O2 . Cl H
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (70-26-8)

Absolute stereochemistry.



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200 REFERENCES IN FILE CA (1957 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
201 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:382323

REFERENCE 2: 138:354249

REFERENCE 3: 138:313560

REFERENCE 4: 138:313146

REFERENCE 5: 138:90080

REFERENCE 6: 138:79170

REFERENCE 7: 138:11404

REFERENCE 8: 137:201605

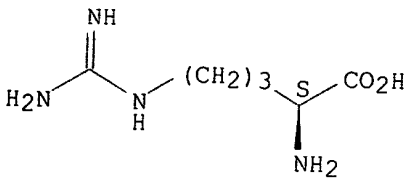
REFERENCE 9: 137:182046

REFERENCE 10: 137:14843

L17 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **1119-34-2** REGISTRY
CN L-Arginine, monohydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Arginine, monohydrochloride, L- (8CI)
OTHER NAMES:
CN Argamine
CN Arginine hydrochloride
CN Arginine monochloride
CN Arginine monohydrochloride
CN Argivene
CN Detoxargin
CN L-Arginine hydrochloride
CN Levargin
CN Minophagen A
CN R-Gene
FS STEREOSEARCH
MF C6 H14 N4 O2 . Cl H
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM*, DIOGENES, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA,

MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (74-79-3)

Absolute stereochemistry.



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464 REFERENCES IN FILE CA (1957 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
464 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:367896

REFERENCE 2: 138:251274

REFERENCE 3: 138:166253

REFERENCE 4: 138:79170

REFERENCE 5: 138:44748

REFERENCE 6: 138:44733

REFERENCE 7: 137:268138

REFERENCE 8: 137:213146

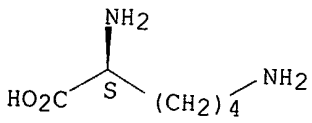
REFERENCE 9: 137:182880

REFERENCE 10: 137:182046

L17 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2003 ACS
RN **657-27-2** REGISTRY
CN L-Lysine, monohydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Lysine, monohydrochloride, L- (8CI)
OTHER NAMES:
CN Darvyl
CN L-Gen
CN L-Lysine hydrochloride
CN Lyamine
CN Lysine hydrochloride
CN Lysine monohydrochloride
CN Lysion
FS STEREOSEARCH
DR 305-76-0, 93394-22-0
MF C6 H14 N2 O2 . Cl H

CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, DIOGENES, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, MSDS-OHS, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (56-87-1)

Absolute stereochemistry.



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895 REFERENCES IN FILE CA (1957 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
896 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:384612

REFERENCE 2: 138:374161

REFERENCE 3: 138:326609

REFERENCE 4: 138:313146

REFERENCE 5: 138:304496

REFERENCE 6: 138:303872

REFERENCE 7: 138:286318

REFERENCE 8: 138:264732

REFERENCE 9: 138:255476

REFERENCE 10: 138:243303